BRITAIN'S BEST-SELLING MACINTOSH MAGAZINE

MACFORMAT

ISSUE 53 ■ AUGUST 1997 ■ £3.99 WITH HD DISK

US $10.95 ■ HFL 21.50 ■ £5.00 elsewhere outside UK & Eire

Also available with 2 CD-ROMs

Connect!

Everything you need to know about connecting your Mac to other computers – across the room, over an office network or via the Internet!

On this issue's Cover Disk

Organise your Web addresses with URL Manager Lite ■ Screen out unwanted animations, adverts and cookies with WebFree ■ 3D tactical warfare in 3D Cannon ■ Add an easy-to-use task bar with GoMac ■ Access hidden System 7.5 Finder features with CustoFinder 7 PLUS KidCalc ■ StuffIt Expander

If your HD disk is missing, ask your newsagent

PLUS On test: the latest modems and e-mail software ■ Mac-friendly Internet Service Providers ■ The fastest notebook computer on earth ■ New multimedia and games, including gorgeous graphic adventure Broken Sword ■ Yet another new spreadsheet program ■ How to get more from ClarisWorks

future PUBLISHING

YOUR GUARANTEE OF VALUE

9 770968 330020 08

The Mac Zone United Kingdom

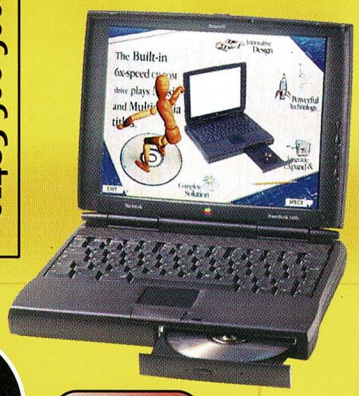
Latest Offers from The Mac Zone

Please post your orders to:

Fax us on 01483 500 513
Call us on 01483 500 500

Call FREE on 0800 393 696

Apple PowerBook 1400



1400CS 117 12/750
£999.00

1400CS 117 16/750CD
£1,199.00

1400CS 117 16/750CD & colour StyleWriter 2200
£1,399.00

1400C 133 16/1.1GB CD
£2,049.00

LOW

Performa 5400/160

- 160MHz 603e processor
- 1.6GB HD & 16MB RAM
- Built-in 15" display
- 8x CD-Drive

FREE COLOUR STYLEWRITER 1500

£999.00

Performa 5400/180

- 180MHz 603e processor
- 1.6GB HD & 16MB RAM
- Built-in 15" display
- 8x CD-Drive

FREE COLOUR STYLEWRITER 2500

£1,299.00

Agfa Snapscan

Desktop, flatbed scanner with one-pass scanning and max. resolution of 300 x 600 dpi

£169.95

Peforma 6400/180

- 180MHz 603e processor
- 1.6GB HD & 16MB RAM
- 28.8 modem
- 8x CD-Drive

FREE COLOUR STYLEWRITER 2500 & 15"AV MONITOR

£1,099.00

PowerBook 1400 RAM

8MB	£79.00
16MB	£119.00
24MB	£149.00
32MB	£199.00

Genuine Syquest (10)

44MB	£23.95
88MB	£25.95
105MB	£27.95
200MB	£37.95
270MB	£33.95
EZ 135	£11.95
EZ 230	£18.95

d2 Optical (10 off)

128MB	£5.95
230MB	£6.95
640MB	£23.95
1.3GB	£32.95
2.6GB	£47.95
540DZ	£35.95

Record. CD's (74 mins) (10) £4.75

6 Pack Iomega 100MB zip carts (10) £59.95

Iomega 1GB jaz carts (10) £69.95

PLEASE CALL FOR OTHER QUANTITY PRICES.

PPC 168 Pin DIMM's

8MB	£35.00
16MB	£69.00
32MB	£129.00
64MB	£249.00

72 Pin SIMM Memory

4MB	£19.00
8MB	£29.00
16MB	£69.00
32MB	£119.00
64MB	£249.00

30 Pin SIMM Memory

2MB	£15.00
4MB	£22.00
8MB	£49.00
16MB	£79.00

PowerBook 3400 RAM

16MB	£99.00
32MB	£179.00
48MB	£229.00
64MB	£349.00

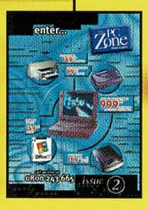
MEMORY PRICING CAN BE SUBJECT TO FLUCTUATIONS. PLEASE CALL FOR THE LATEST PRICES.

Essential Hardware

Formac 17" monitor FST	£329.95
Formac 20" Trinitron monitor	£879.95
Formac ProVision 4/60	£239.95
Olympus C800L	£699.95
Casio QV-300 camera	£549.95
Motorola v.34 28.8 modem.	£99.95
Umax S-6E	£179.95
Umax S-12 scanner	£325.00
Umax PowerLook II Pro	£1,449.95
d2 12x CD ROM Drive	£159.95
d2 2x CD Writer	£369.95
d2 DZ-540 Optical Drive.	£229.95
d2 2GB External Drive	£269.95
d2 CD-ROM PowerChanger	£249.95
Epson Stylus Colour 600.	£239.95
Epson Stylus Colour 800.	£349.95
Epson Stylus Colour 1520.	£629.95
Kodak DC-20 digital camera.	£199.95
Fuji DS-7 digi. camera	£399.95
Mac Zone 4x CD ROM Drive	£129.95
Mac Zone Extended Keyboard.	£49.95

Essential Software

Adobe Illustrator 7.0	£199.95
Adobe Publishing Collection 1.0	£869.95
Adobe PageMaker 6.5 (upg)	£99.95
Adobe Acrobat 3.0 (upg).	£49.95
Adobe Graphics Collection 2.0	£499.95
CorelDraw 6 (comp. upg).	£89.95
Corel Photo Library CD's ..from	£19.95
Corel Printhouse	£19.95
NEW M.Y.O.B. v.6	£149.95
Microsoft Office (students).	£89.95
FreeHand Graphics Studio.	£399.95
Director Multimedia Studio	£799.95
Macromedia Flash.	£195.95
Fractal Expression	£129.95
Fractal Painter 4.0	£299.95
Quark Xpress.	£619.95
ClarisWorks 4.0 internet ed.	£89.95
Dr.Solomon's Anti-Virus.	£59.95
Norton Utilities 3.2	£79.95
Ram Doubler 2 (upg)	£24.95
Quay2/VTC training CD's from	£9.95



Zone Finance - now available

Finance now available to personal and corporate customers

All your system requirements can be covered

Finance available on purchases over £750 +VAT with flexible repayments to suit

Finance backed by household name companies

Please call our dedicated finance team for details

ZONE FINANCE

MasterCard VISA SWITCH DELTA AMERICAN EXPRESS ZONE FINANCE

Leasing schemes available. Please call for details

All prices shown are for business users and exclude VAT. Consumers please add 17.5% VAT.
All products and prices are subject to availability.
All prices exclude carriage (minimum £5.99 per order) and VAT. All trademarks are acknowledged as belonging to their respective companies. E.& O.E.

Genesis House,
Merrow Lane,
Merrow,
Guildford
GU4 7BN

Your One Stop Macintosh Supplier

The Mac Zone United Kingdom

Fax us on
01483 500 513
Call us on
01483 500 500

Call FREE on **0800 393 696**

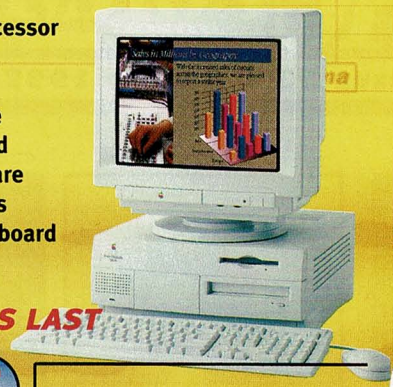
StarMax & Umax Clones

CALL FOR PRICING ON THE FULL RANGE OF STARMAX AND UMAX CLONES

PRICES START FROM **£595.00**

Apple Performa 6320

- 120MHz 603e processor
- 1.2GB Hard Disk
- 8MB RAM
- 8x speed CD-Drive
- 16 bit stereo sound
- Includes 12 software & 11 CD-ROM titles
- Includes CPU, keyboard & mouse



WHILE STOCKS LAST

£549.00

£769.00 *OR WITH 15" APPLE MULTISCAN MONITOR*

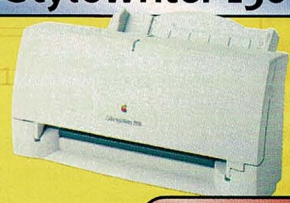
Umax Astra 600s

- Large US legal sized bed
- 30-bit colour, 8-bit greyscale
- 300 x 600 dpi

Includes Mac and PC Drivers

£169.95

Apple StyleWriter 1500



Colour printing for less than £100

£99.95 *NEW LOW PRICE*

Iomega Zip Drive

Store 100MB at a time on this portable drive.

- Includes one free cart and connection cables

£99.95

6-PACK OF CARTS **£59.95**

Apple StyleWriter 2500

FREE PhotoGrade kit worth £44.95

£149.95 *NEW LOW PRICE*

Kai's Photo Soap

NEW PRODUCT

Perform sophisticated image editing functions on family snapshots with ease

- Instant cropping, touch up and colour correction
- Pen, pencil, brush, eraser tools
- Mimic real life by dropping tools in virtual desks or leave them in a mess on your desktop

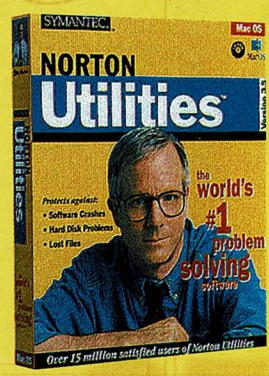
NEW **£44.95**

Norton Utilities 3.5

NEW VERSION

Diagnose and treat crashes and even prevent your Mac from freezing

- CrashGuard displays a dialogue box detailing the crash and allows you to save data
- Enhanced Speed Disk running 300% faster than before & allows you to defragment single files



£79.95 *FULL PRODUCT*

Call for your FREE copy of the latest Mac Zone catalogue

Please call for a copy of The Mac Zone terms and conditions of trading. All products and prices are subject to availability. E.& O.E.

12706

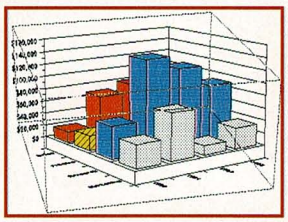
MACFORMAT
ISSUE 53 ■ AUGUST 1997

The Finder

Reviews A-Z

Your easy index to products reviewed in this issue

abc CD-ROM	105
Acacia Revise Geography	103
Broken Sword	106
Claris Em@iler 2	80
The Crow	98
Earth Quest	102
Eudora Pro 3.0	80
F/A-18 Hornet 3.0	108
Global Village Teleport 33.6 modem	73
Hayes Accura 33.6 modem	74
Inside Independence Day	99
The Last Express	110
Majestic: Alien Encounter	113
Motorola 3400 Pro modem	72
Nursery Rhyme Time	105
Olympus 230 PowerMO II	79
ONE Pro 4x/6x CD-Recorder	78
101 Dalmatians Animated Storybook	104
Opcode Overture 2.0	90
Pace Microlin 33.6 modem	74
PowerBook 3400c/240	76
Pyst	114
QuickMail Pro	80
Romeo & Juliet	100
USR Sportster Voice 33.6 modem	73
Wingz 2.5	86



Another new Mac spreadsheet – does this one fly? Page 86.

Good clean fun: *The Crow* is one of three movie CDs on page 98.

Test-fly the latest F/A-18 Hornet flight sim on page 108.

Make your own CD-ROMs with the ONE Pro: page 78.

Buyer's Guide

The Chooser 121

With over 160 products rated, all the Macs on sale in the UK listed and the latest product news, we've got all the buyer's advice you need.

Free Reader Ads 139

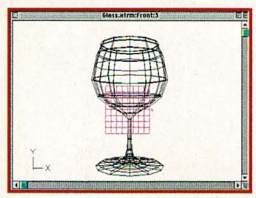
Over 120 second-hand bargains in MACFORMAT's reader marketplace. Buy, sell or swap.

Win! Win! Win!

USR modems and QuickMail Pro 146

Get yourself on-line for free with the US Robotics Sportster 33.6 modem. We've got five, worth £149 each, up for grabs in our competition, plus ten copies of the brand new e-mail package *QuickMail Pro 1.5* from CE Software!

How to...



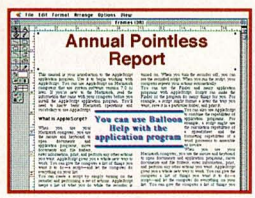
Extreme 3D 56

ON THE CD

Macromedia's superb 3D package is free in our double-CD pack this issue. MACFORMAT gives you a head start in getting to know the newest full program in your collection!

Publish graphics 58

Good desktop publishing involves more than using the right page-layout software. In the first of a new series, we show you to make your graphics perfect for printing and wonderful on the Web.



ClarisWorks 60

You can use *ClarisWorks* to create documents that look like they were laid out in a DTP program, if you follow our step-by-step guide to creating multi-column layouts.

Regulars

Welcome to MACFORMAT 7

Meet the team and find out what we love most about the Internet. (Yes, we found something.)

News 18

Apple unveils an ambitious plan which could lead to software that will work on any computer, straight out of the box. Find out what it means for your Mac. Plus: Newton unleashed, and a bright PowerPC future.

What's New: product news 26

Now they really *are* selling software like it was soap powder: MetaCreations reveals its £40 photo cleaning tool. Plus: *Communicator, Norton* and *Duke Nukem.*

Apple Talk: letters 30

Is Apple getting the message across with its new ad campaign? You have your say.

MacAnswers 62

Can't update your System or get 3D programs to run on your Performa? Problems solved here!

Subscribe to MACFORMAT 115

Claim any one of three great programs when you subscribe.

Back Issues 142

Complete your collection and try our new fax-back service.

Contacts 144

How to contact us and where to go for information.

Mac and Tosh 144

When a man's best friend is his Mac...

Next Issue 145

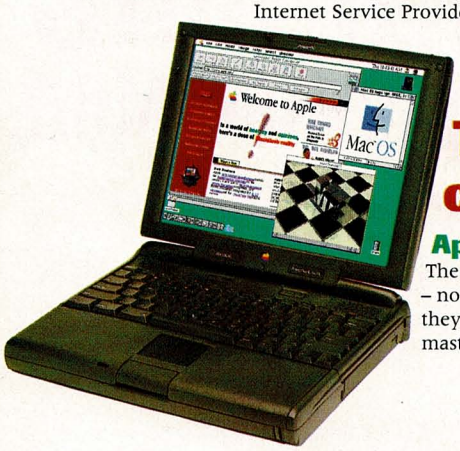
Coming your way in just four weeks' time – and counting...

Join an *Earth Quest* with Dorling Kindersley's latest CD-ROM: page 102.

Connect!

How to join the Mac community page 34

ON THE CD MACFORMAT shows you how easy it is to get your Mac connected, whether you're linking to a friend's Mac or PC to exchange files and play games, enhancing your business by sharing information over an office network or joining in the worldwide Internet community. Includes a guide to Mac-friendly Internet Service Providers and how to pick your Internet software!



The fastest notebook computer on earth

Apple PowerBook 3400c/240 page 76

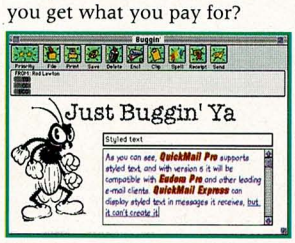
The PowerBook 3400 is faster than any comparable computer – no contest. But have portable Macs reached the point where they can match your desktop machine? We test Apple's new masterpiece to discover if the portability is worth the price.

Modems on test page 70

We put the latest modems from the leading makers through their paces. Which one's going to get you connected?

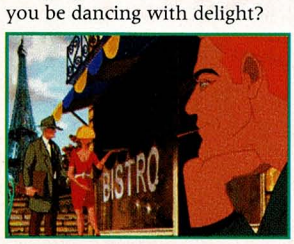
E-mail software page 82

ON THE CD We assess the latest e-mail programs head-to-head, feature for feature. Do you get what you pay for?



Broken Sword page 106

ON THE CD It's an American in Paris all over again for this gorgeous adventure. Will you be dancing with delight?



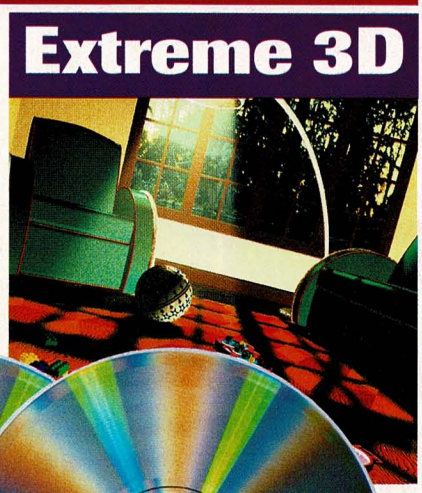
MACFORMAT Cover Discs

ON THE CD This logo in the mag indicates programs on the CD.

MACFORMAT is available in your choice of a CD-ROM or a high-density floppy disk edition every issue:

Your Cover CDs 8

Extreme 3D 1.0 is a fully-featured 3D suite previously sold for £550 – and it's yours free and complete this issue! Plus: try out our Macromedia demos, enjoy demos of *Duke Nukem, Broken Sword, Damage Inc* and Acacia's GSCE revision tools, plus over 100Mb of the latest shareware, a selected utility suite, and everything below.



Your floppy disk 14

We've packed in over 3Mb of top software, including two-player 3D action in *3-D Cannon* and a facelift for your Finder with *GoMac;* plus five other essential utilities.

Reviews

Our reviews policy 69

Why you can trust a MACFORMAT review.

Hardware

Modems 70
Get on-line as we test five leading modems and assess the latest technology developments:
- **Motorola 3400 Pro** 72
- **US Robotics Sportster Voice** 73
- **Global Village Teleport 33.6** 73
- **Pace Microlin 33.6** 74
- **Hayes Accura 33.6** 74

Apple PowerBook 3400c/240 76
As seen in the movies: can the PowerBook 3400 live up to its glamorous image?

ONE Pro 4x/6x CD-Recorder 78
Make your own CD-ROMs for under £600.

Olympus 230 PowerMO II 79
Does this new drive offer the storage you need?

Productivity

E-mail software 80
The leading e-mail packages compared head-to-head... plus the alternatives that cost nothing!
ON THE CD
- **Claris Em@iler 2**
- **Eudora Pro 3.0**
- **QuickMail Pro**

Wingz 2.5 86
Can this new spreadsheet really excel?

Opcode Overture 2.0 88
Turn your tunes into scoresheets with *Overture.*

Leisure

Movie multimedia 98
Grab yourself a scoop of popcorn for:
- **The Crow** 98
- **Inside Independence Day** 99
- **Romeo & Juliet** 100

Multimedia 102
Education for kids of all ages:
ON THE CD
- **Earth Quest** 102
- **Acacia Revise Geography** 103
- **101 Dalmatians Storybook** 104

- **Nursery Rhyme Time** 105
- **abc CD-ROM** 105

Games 106
Four epic adventure sagas (well, maybe three and a half...) plus a favourite flight sim:
ON THE CD
- **Broken Sword** 106
- **F/A-18 Hornet 3.0** 108
- **The Last Express** 110

- **Majestic: Alien Encounter** 113
- **Pyst** 114

Shareware Central 116
ON THE CD Jazz up your Mac Desktop and ban those Web adverts with low-cost software.

THE WORLD'S No.1 MODEM IS NOW MAC COMPATIBLE- SPORTSTER VOICE 33.6 MAC WITH PERSONAL VOICE MAIL

The new Mac compatible Sportster Voice 33.6 Mac faxmodem from U.S. Robotics provides Internet access and data speeds of up to 33.6Kbps plus E-mail, fax and voice mail facilities†- all in one compact unit. Sportster Voice Mac can also be upgraded to x2- the new technology from U.S. Robotics, to give you Internet download speeds of 56Kbps over ordinary analogue lines.*

Multiple voice mailboxes store telephone messages via your Mac, which can even be retrieved remotely- when you're out at another location. The speakerphone facility allows you to use your Sportster as a hands-free telephone- providing the ultimate communications system for your home or office.

Apple Mac compatible software and cables are included allowing you to be up and running within minutes of taking it out of the box.

Sportster Voice 33.6 Mac faxmodem- Internet Ready with:

- **Internet access at up to 33.6Kbps- 56Kbps with x2 upgrade (chargeable)***
- **Free .net/Yell Guide to the Internet**
- **Free Communications Software**
- **Free Cables and Connectors**
- **Free Lifetime Technical Support**
- **Free 5 Year Warranty**

Sportster Voice 33.6 Mac faxmodem with Personal Voice Mail

WAS £199

NOW £149

RRP Inc. VAT**

External version only

Sportster® Voice

Sportster®- the World's No.1 Modem from U.S. Robotics

† A soundcard, with audio cable, powered speaker or headset is required to utilise all voice features including the hands-free speakerphone facility.

* x2 Chip Upgrade availability to be announced.

All Sportster Voice Mac faxmodems are supplied with an x2 registration form.

***Supporters of x2 Technology at 56Kbps*- Netcom, Cable Online, AOL, UUNET PIPEX and CompuServe all use U.S. Robotics equipment to provide their On-line Services**

FIVE YEAR 5 WARRANTY

AVAILABLE AND WORLDWIDE ACROSS EUROPE

For further information call the U.S. Robotics sales team on

FREEPHONE 0800 146813

QUOTE CODE MF087V

U.S. Robotics®

The Intelligent Choice in Information Access

www.usr.co.uk/mformat/

**RRP Price excluding VAT. £126.81

U.S. Robotics Limited, 220 Wharfdale Road, Winnersh, Wokingham, Berkshire RG41 5TP

Welcome to MACFORMAT

Everything you wanted to know about MACFORMAT, plus what we think is the best thing about getting connected...

Meet the MF team

Richard Hill

Our Deputy Editor and news guru says the Web's search tools, which enable you to find almost any bit of information you need, can prove revealing in other ways. His mother recently had her first go on the Web while he ran some errands. He returned to find her studying a Buddhist monastery's home page... "I was looking for 'Zen'," she explained.

Lindsay Bruce

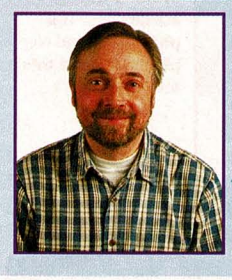
Our Technical Writer says "the best thing about getting connected is all the lovely free software you can download, and the reams of technical information about Macs. A veritable goldmine for anyone handy with a soldering iron. The worst thing about it is the time it takes to download Bungie's Web page. Repeat after me: 'Huge JPEGs R not us'..."

Brian Smith

Our Disc Editor says: "Why do I use the Internet? Because I get paid to search for cool shareware and commercial demos and then play – er, I mean *test* them. Yep, it's a hard life being a CD editor."

Derek Smith

As the company's roving software trouble-shooter and our all-round Mac technical expert, Derek says he's into the intranet and Java at the moment. He reckons they have a really long term future, and should be around for at least the next 14 months. Looks like the computer industry changes trends more often than Derek changes underwear...



Rod Lawton

MACFORMAT's productivity software specialist says the best thing about being on-line is e-mail, and not having to queue for stamps at the Post Office on pension day behind 437 old ladies who want to buy one and a quarter television licence stamps but can't find their purses. (Just don't ask how Rod reacts when he has to wait for a file to download...)

Alex Summersby

Editor

When I was at school, it was the heyday of the "alternative bookshop". There were half a dozen of them at the seedier end of town, filled with astonishing treasures.

They had fabulous underground comics, and odd gadgets with exotic names like "bong" and "hookah", the uses of which are still a mystery to me... and of course unique books from counter-culture tracts and *The Little Red Schoolbook* (which caused a scandal by explaining sex to kids in plain terms a decade before *Where Did I Come From?)* to works on psychic phenomena or government conspiracies. And they were places to meet unconventional people and exchange news, views and gossip.

Inevitably, there was a flipside. There were "subversive" pamphlets and books, like those from which a schoolmate of mine learned how to make A-bombs. (Not that he ever did so – as far as I know...) There was an awful lot of dust and mess. And the people who ran the shops did it out of personal commitment, so the concept of *service* was almost completely alien to them.

In all these ways, the alternative bookshops of my youth were very like the Internet today. From entertainment, counter-culture and the "subversive" to genuinely valuable information you just can't find anywhere else, it's all there – and just as jumbled. And the speed of service is at least as bad... But we'll show you how to get there without the arduous bus trip to the wrong side of town, the dust or the scarier oddballs (unless of course you *want* to meet them). So turn on, plug in and connect up to a wider world! It's a trip worth taking... er, man.

Alex

About MACFORMAT

Welcome to MACFORMAT, Britain's best selling Mac magazine. MF is for you, the person at a Mac keyboard. Every issue we bring you:

- **Tips, techniques and practical step-by-step tutorials** covering the whole range of Mac applications, to help you learn how to get more from your software.
- **Features** about exciting Mac developments and novel uses, accompanied by software on our Cover CD whenever possible, so you can discover what your machine can do and try things you mightn't have tried before.
- The latest Mac-related **news**, plus all you want to know about the wider issues, the people behind the headlines and the stories behind the stories.
- Authoritative, independent **reviews** of interesting and affordable products, with clear buying recommendations.
- **Cover Disks and CD-ROMs** with demos so you can try software for yourself before you buy, useful programs specially chosen to complement features in the magazine, selected shareware, games, readers' contributions and much more.

Whether you're a veteran or a novice, MACFORMAT will help you get more out of your Macintosh, whatever you use it for.

A word about prices...

We try to ensure that all prices quoted in editorial pages in MACFORMAT are accurate at the time of going to press, and they all *include* UK Value Added Tax at 17.5%. However, this may not necessarily be the case with prices appearing in advertisements, so we recommend that you always contact advertisers before ordering to confirm prices and availability.

■ We make every effort to verify all the information we publish, but products and prices do change. We always quote list prices (RRPs), but street prices vary. Shop around, and check with the supplier before buying to make sure that the product you're considering will meet your needs. MACFORMAT cannot accept responsibility for any errors or omissions or for any losses that may arise as a result, but it is our policy to correct any errors of fact whenever we possibly can.

Copyright © 1997 Future Publishing Ltd. All rights reserved. No part of this publication may be reproduced in any form, copied or stored electronically without prior written permission from the publisher.

The most spectacular MACFORMAT Cover CD ever? This issue, we bring you Macromedia's *Extreme 3D v1.0*, as sold for £550! Brian Smith gets creative...

MACFORMAT BONUS CD

Extreme 3D 1.0

Last issue we gave you the universe on a CD, in the form of *RedShift*. This issue we go one better and give you the tools to create your own worlds: Macromedia's stunning *Extreme 3D v1.0*, complete and fully working! Previously sold for £550, *Extreme 3D* is a professional 3D graphics package which enables you to create beautiful images and animations.

We've got a tutorial on page 56 that will lead you through the basics of using *Extreme 3D*, and we'll be running tutorials over the next five months to help you get the most from the program, covering areas such as building models, constructing textures, lighting a scene and also creating animations. The program contains all the functions you need to model, render and animate whole scenes.

There are sample models, textures and tutorials in the **Extreme 3D** folder this issue, along with many examples of images created using *Extreme 3D v1.0*, which will give you a taste of what it – and so *you* – can produce.

Some of the main features in *Extreme 3D v1.0* are:

- Workspace shows models in 2D and 3D.
- Objects editable point-by-point.
- Quickly create 3D models from 2D profiles, using the **Extrude**, **Lathe** and **Sweep** functions.
- Skin tool.
- Objects can be linked and their relative motion constrained.
- Texture mapping of materials including diffuse, ambient, specular, roughness and opacity information.
- Comprehensive frame-based animation system.

Requires:
68040 processor or PowerMac, 16Mb RAM (24Mb RAM or more recommended), System 7.0, 13-inch monitor, 256 colours, QuickTime, 20Mb hard disk space.

Extreme 3D serial number

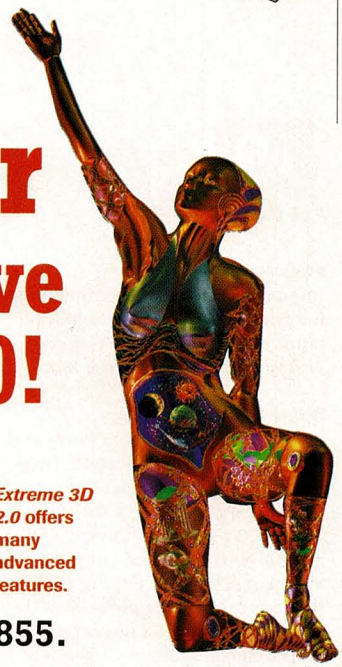
When you install *Extreme 3D 1.0*, you'll be asked to enter your name, a company name and a serial number. That all important serial number is:

40110-0157-4464-52815

***Extreme 3D* can achieve some interesting lighting effects.**

You can add backdrops to your scenes, like the photo of a real sky placed behind this aircraft.

Special upgrade offer – you save over £400!



Extreme 3D 2.0 offers many advanced features.

Extreme 3D 1.0 is a fabulous 3D package – but if you're lusting after still more power and even *more* features, then you need look no further than the brand-new upgraded version, *Extreme 3D 2.0*.

Version two adds loads of new features, including:

- Full support for GIF, VRML and Progressive JPEG files formats.
- Metaform tool that can create complex organic forms from 2D profiles.
- Particle tool for creating smoke, fire and bubbles. Particles can be controlled by velocity, drag, gravity and lifespan controls.
- Transparency in shadows.
- Support for Apple's QuickDraw 3D and Microsoft's Direct 3D systems too.

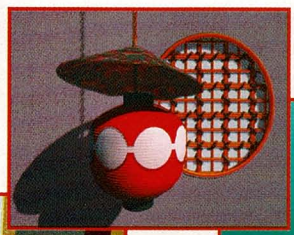
Requires:
PowerMac, System 7.1, 16Mb RAM (24Mb or more recommended), eight-bit colour (24-bit colour recommended).

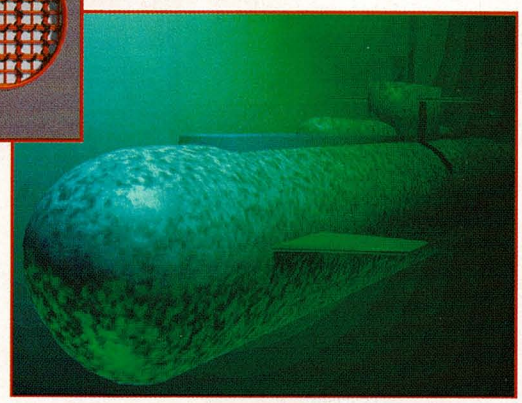
As a MACFORMAT reader, you can upgrade to *Extreme 3D 2.0* for the specially discounted price of just £239 (including VAT and delivery) – that's a huge saving of over £400 off the RRP! (This offer is only open to UK callers.) ➤

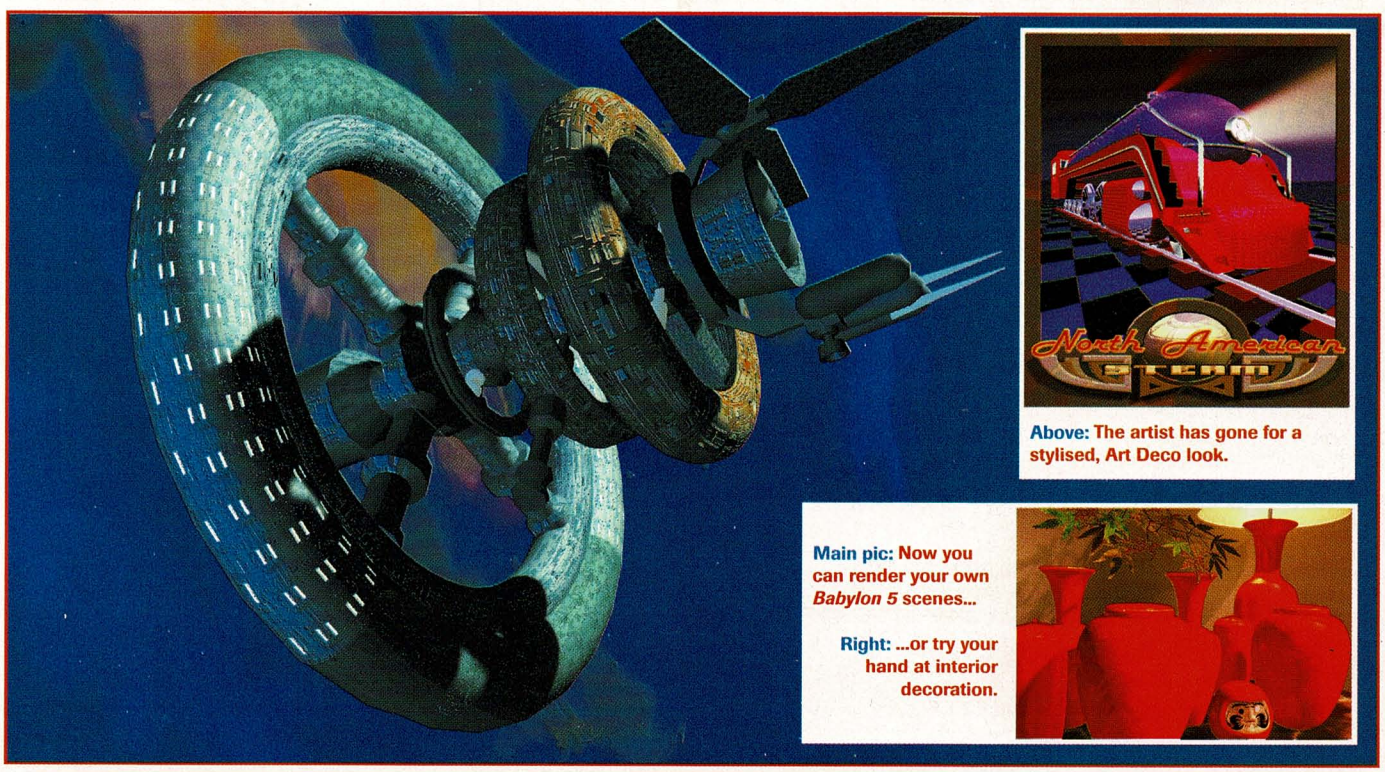
To place your order, call Macromedia direct on 0181 358 5855.

Extreme 3D **scenes can be exported for manipulation in** ***Photoshop*** **after rendering.**

Atmospheric lighting has been used here to create the illusion of a submarine passing through murky water.







Above: The artist has gone for a stylised, Art Deco look.

Main pic: Now you can render your own ***Babylon 5*** **scenes...**

Right: ...or try your hand at interior decoration.

Also on your bonus CD

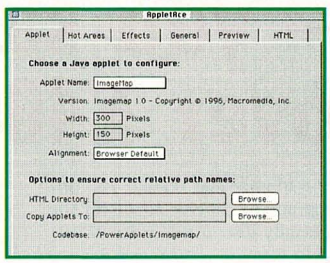
Macromedia demos

Interactive demos of Macromedia's industry-leading creative applications including *Director, FreeHand, Fontographer* and *SoundEdit 16*.

Wraptures

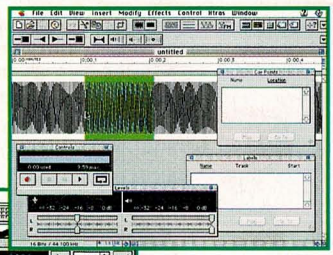
41 textures selected from Form and Function's texture collection. Each texture set consists of several colour maps (512 x 256, 640 x 480 and 256 x 128 resolution, in eight-bit and 32-bit colour) and bump or transparency maps. They're perfect for texture-mapping onto 3D models, or for use in multimedia authoring applications. If you buy *Extreme 3D 2.0*, you'll receive the full *Wraptures* collection as part of the bundle.

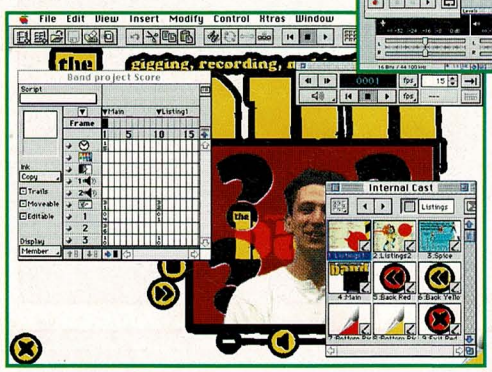
See our special upgrade offer on page 9 for information on how you can save over £400 on the complete *Extreme 3D* upgrade!



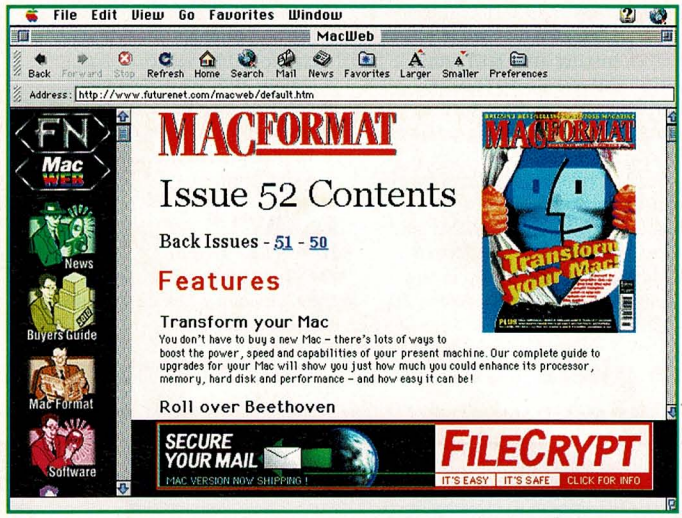
The Band

Learn all about Future Publishing's new magazine offering advice on how to make it big in the music business. If you're in a band or want to be, this is where to look.



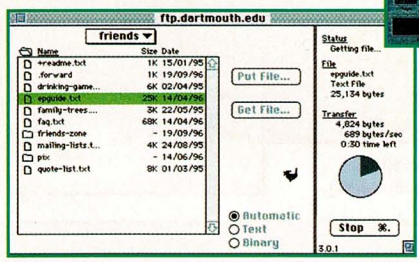


Your bonus CD includes demos of the full range of Macromedia's multimedia creative software.


File Edit View Go Favorites Window
MacWeb
Back Forward Stop Refresh Home Search Mail News Favorites Larger Smaller Preferences
Address: http://www.futurenet.com/macweb/default.htm
MACFORMAT
Issue 52 Contents
Back Issues - 51 - 50
Features
Transform your Mac
You don't have to buy a new Mac – there's lots of ways to boost the power, speed and capabilities of your present machine. Our complete guide to upgrades for your Mac will show you just how much you could enhance its processor, memory, hard disk and performance – and how easy it can be!
Roll over Beethoven
News
Buyers Guide
Mac Format
Software
SECURE YOUR MAIL
MAC VERSION NOW SHIPPING !
FILECRYPT
IT'S EASY
IT'S SAFE
CLICK FOR INFO

Internet Software

We've collected a selection of shareware and commercial demos of software that will help you get the most from the Internet. They're arranged into categories to make it easier to find what you want, and there's a full listing in the box at the bottom of this page.



Whether you want to browse the Web, play network games or download demos, there's bound to be something for you in our Internet software collection. And yes, that is MACFORMAT at http://www.futurenet.com/

Bonus CD index

Here's a full list of the contents of your MACFORMAT bonus CD:

Extreme 3D 1.0

Macromedia's dazzling 3D modelling, animation and rendering package.

Wraptures

41 textures taken from the Form and Function *Wraptures* collection.

Extreme 3D Tutorial

The files used in this issue's tutorial, which you can find on page 56.

Macromedia Demos

Interactive demos of all Macromedia's top creative software including: AppletAce 1.0 ■ Authorware 3.5 ■ Deck II 2.5 ■ Director 5.0 ■ Flash 2.0 Fontographer 4.1 ■ FreeHand 7.0 ■ SoundEdit 16 2.0 ■ xRes 3.0

Internet

If you want shareware and commercial demos to help you get the most from your Internet connection, this is the place to find them. If you can't find what you need, try our **50 Essential Mac Web Pages** and **Net Directory** HTML pages, which you'll find in the **MACFORMAT Web Pages** folder. They contain links to useful Mac Web sites.

Archiving Utilities
Compact Pro 1.51 ■ DiskCopy ■ DropStuff w/EE 4.0 ■ ShrinkWrap 2.1 ■ StuffIt Expander 401 ■ StuffIt Lite 3.6

Chat
ChatNet v2.0.8 ■ Homer 0.94 ■ Ircle 2.5 ■ Talk 1.1.1

Connection
FreePPP 2.5v3 ■ InterSLIP ■ PPP Menu 2.0.3 ■ PPPremier Timer 1.3.3

E-mail
Claris Emailer 1.1v3 complete ■ Claris Emailer 2.0 demo ■ Email Effects 1.1 ■ Email Merge 1.3 ■ Eudora Light 3.1 ■ Mail Drop 68K ■ Mail Drop PPC ■ Picture Postcard ■ QuickMail Express

FTP
Anarchie 2.0.1 ■ Fetch 3.0.3 ■ Net-Batch ■ NetFinder 1.1.3 ■ VICOM FTP Client

Games
Avara Collection 1 ■ Avara Installer ■ Battle for the Planets ■ Bolo ■ Dome Wars 1.2 ■ Fixation ■ MacFIBS 2.1 ■ MacGo ■ NetMech ■ Netra 68K .07

Games protocols
Easy IPTnnl ■ IPRemote.2.0b4 ■ kali10b4 ■ MacMoose 1.0b1 ■ Mud Wrestler ■ NetLink ■ TCPSerial 1.0.1

Plug-ins
ActiveX SDK ■ AnySearch 1.0b12 ■ Crescendo 2.0 ■ Envoy ■ Fractal Viewer for Netscape ■ Live 3D ■ MacZilla

Usenet
InterNews 2.0.2 68K ■ InterNews 2.0.2 PPC ■ MacSOUP 2.2 ■ MT-NewsWatcher 2.3.1 ■ NewsWatcher 2.1.6 ■ NewsWatcher 2.4.0 ■ Nuntius 2.0.4

Utilities
InternetConfig1.3 ■ IP Monitor 1.1.1 ■ MacTCP Monitor 1.0d30 ■ MacTCP Switcher ■ Net-Print 7.3 ■ NetBots 2.0 ■ URL Manager Pro ■ Web Devil 2.0 ■ WebFree ■ WebWatcher

Web Browsers
Internet Explorer 3.01 with IMN ■ Install Tiber ■ MacWWW V1.03 ■ NCSAMosaic 3.0

The Band

Find out about Future Publishing's new music magazine, which shows you how to make it in the music business. If you have aspirations to be in a band – but aren't sure how to go about it – this magazine will put you in the know.

Broken Sword exclusive demo ■ Duke Nukem three-level demo ■ Revise interactive demo ■ Flight action with F/A-18 Hornet 3 ■ Readers' corner

MACFORMAT COVER CD

Broken Sword: The Shadow of the Templars

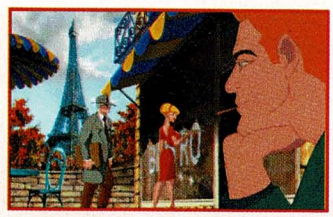
What is it? Playable demo
Where you'll find it: Demos folder
Mac: PowerMac only
PowerMac: any
Requires: 12Mb RAM, 256 colours, 2x speed CD drive, System 7.0, 30Mb hard disk space

In *Broken Sword* you play the part of George Stobbart, an American tourist who is visiting Paris when he witnesses a foul murder.

Your task is to find out who is responsible for the killing and why. To do this, you have to solve a series of puzzles by manipulating objects and interacting with people, using a point-and-click interface.

Our exclusive demo gives you access to the first section of the game. After an introductory movie clip, you're left standing outside a bomb-damaged café. The movie revealed that the assassin ran off, through an archway to the right of the café. If you explore the alleyway where the assassin went, you'll find that the only way he could have escaped is through the sewers. Unfortunately, you've no way of lifting the manhole cover, yet. When you return to the café you'll discover that the old man whom you saw enter it earlier has been killed by the explosion and the waitress is slumped over in the corner. She looks a bit dazed – maybe you should give her something to drink.

The waitress breaks down in tears after yet another drinking binge ends in disaster.

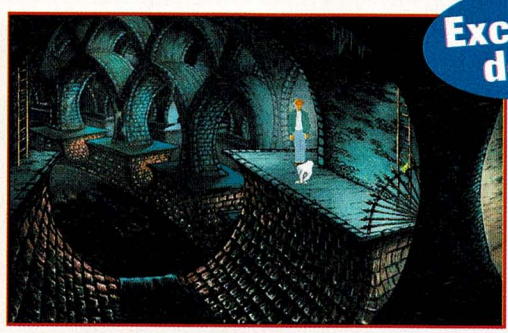


George is very impressed with the scenery. It's the first time he's seen the Eiffel Tower.

As with most graphic adventures, it's a good idea to pick up everything you can – you never know what may come in useful. Also, talk to all the characters you meet – they often have useful information or objects to give you.

Turn to page 106 for our review of the full game.

After being questioned by the rather inept French police, George revisits the scene of the crime.



George tours one of Paris's less picturesque areas. Unfortunately, this is as far as you can go in the demo.

Exclusive demo

To install

Drag the **Install Broken Sword** file to the hard disk you'd like to install it to, double-click on it and follow the on screen prompts. ➤

Getting started

Welcome to the MACFORMAT 53 Cover CD. Here are some tips:

■ Some of the demos on the Cover CD require installation on your hard disk – they won't run direct from the CD. Many of these programs use an installer: once you've double-clicked on it, just follow the on-screen instructions and you should be fine. Even if there's no installer, it often helps to copy demos to your hard disk – at the very least they should run faster than from the CD!

■ The icons we use on the CD folders help to give it a friendly atmosphere, but they do slow it down. Install *CDIconKiller*, which is in the Resources folder on the CD, to speed things up.

■ If you have problems quitting any of the rolling demos on the CD, just press [command] Q and this should take you back to the Finder. If this doesn't work, hit [command] [option] [escape] to Force Quit.

■ It couldn't be easier to install System Extensions and Control Panels – just drag them over your closed System Folder and your Mac puts them in the right place. Then you simply need to Restart.

■ Look for this icon throughout the issue – it will point you towards the CD contents that are connected with the feature or review you're reading.

ON THE CD

CD index

Here's a handy guide to all the major items on this month's Cover CD...

Demos

Broken Sword (full game review, page 106) ■ Damage Incorporated ■ Duke Nukem ■ F/A-18 Hornet 3 (full game review, page 108) ■ Kids Arcade Pak ■ Last Express preview ■ Step On It! ■ Terminal Velocity ■ Acacia Educational Multimedia (see our *Geography* review on page 102)

Jonni Starr Episode 8

Join our intrepid space explorer in his continuing exclusive adventure.

MacAnswers

Updaters and utilities mentioned in "MacAnswers" on page 62:
■ CDT 2.5.1 Updaters ■ Crisis Tool 2.x->2.0.6 Updater ■ FWB HD Tool-Kit updater ■ GURU 2.4 ■ HDT 2.0 & 2.0.1->2.0.6 Updater ■ Iomega Installer ■ TechTool™ v1.1.4 ■ The InformInit v1.3

MACFORMAT Floppy

CustoFinder 7 1.2.4 ■ GoMac 1.1 ■ KidCalc! 0.91 ■ StuffIt Expander 4.0.1 ■ URL Manager Lite ■ WebFree ■ 3-D Cannon

Readers' Corner

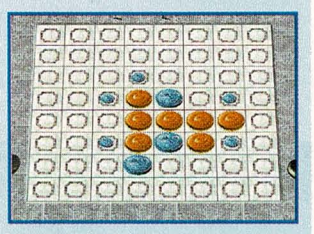
Contributions and artwork submitted by our talented readers.

Resources

Acrobat Reader 3.0 ■ CDIconKiller 1.4 ■ CFM-68K 4.0 ■ Disinfectant 3.6 ■ DOCMaker SW 4.7.1 ■ DropStuff w/EE 4.0 ■ GraphicConverter ■ MACFORMAT CD Index ■ NewsWatcher 2.1.6 ■ QuickTime 2.5 ■ ResEdit 2.1.3 ■ ShrinkWrap 2.1 ■ SoftwareFPU 3.04 ■ Sound Manager 3.2 ■ StuffIt Expander 4.0.1 ■ System 7.5 Update 2.0 ■ System 7.5.5 Update

Shareware Central

The shareware reviewed in this month's "Shareware Central" on page 116:
■ Battle for the Planets ■ HiTech Calc! Set ■ Mantra II v1.0 ■ Painting 1.0.2 ■ Reversi • The Eclipse ■ Typical 1.0 ■ Window Monkey 1.1



***Reversi • The Eclipse* – a networkable version of *Othello*.**

Shareware Plus

We bring you the latest shareware and freeware from the Internet, arranged into handy categories so that you can browse the programs with ease.

Duke Nukem 3D

What is it? 3-level playable demo
Where you'll find it: Demos folder
Mac: 68040
PowerMac: any
Requires: 8Mb RAM, 256 colours

If you're a confirmed *Doom* or *Marathon* addict, you'll love this. The plot is... oh, does it matter? You won't want to play *Duke Nukem* for a carefully written plot; it's blasting action you want and that's exactly what this game delivers. There are loads of great weapons to pick up (see the "Mass Destruction" box for more details).

There are some nice features hidden in the game. For example, try using any of the machines that you come across and see what happens, or try playing on the pool table by shooting the balls with one of your weapons (the rocket launcher is not recommended for this!).

Duke has a comment for every occasion, usually riddled with bad language. You also get to tour LA's red light district. So, this is certainly not a game for the kids. If you're a parent, you needn't worry, though; you can lock *Duke Nukem* with a password to prevent your children learning "interesting" new words.

As well as all the cool weaponry on offer, there are some extra bits of equipment for you to play with, including a jet-pack, night vision goggles and a holo Duke borrowed from *Total Recall*, which projects a holographic image to draw the enemy's fire. If you don't want to search for all this, try using the cheats listed in the "Mass Destruction" box. Happy blasting!

Don't miss our review of the full game next issue.

Left: Something tells me this policeman is a little bit annoyed.

Below: Duke attempts the perfect break, quite literally.

There's a handy auto-mapping feature in case you lose your bearings. To see your position on the map, just type in dncoords at any time; to display the entire map, type dnshowmap.

To install

Duke Nukem can be run directly from the CD. Locate the correct version of the demo for your Mac, either **Duke Nukem 3D Demo 68K** or **Duke Nukem 3D Demo PPC**, and double-click to launch it.

Mass destruction

An integral part of a 3D shoot-'em-up is the range of weapons you can pick up as you progress through the game, and *Duke* is no exception.

Here's a summary of the weapons you'll find in this demo. If you're too lazy to search for them, type dnstuff for all the weapons, items and full ammo. To get all the items, type dninventory; dnhyper gives you a shot of steroids for some hyperactive action; dnmajor infinite jet-pack fuel (if you have it!). Also try typing dnkeys, dnweapons and dnunlock and see what happens...

When you're low on ammo there's always your legs to fall back on! It's not that effective, though.

You start the game off with a basic firearm, the pistol. It's slow and lacks killing power.

The shotgun is great fun. It's about as slow to reload as the pistol but much more destructive, especially at close range.

The machine-gun is the perfect weapon for crowd control, but not terribly accurate. Still, you can't have everything...

Remote-controlled explosives! Pipe bombs are detonated remotely after you've thrown them.

Rockets explode on contact, taking out everything in the immediate area, including Duke if you're too close!

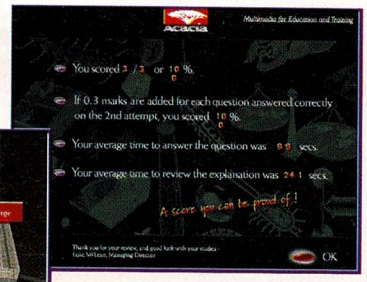
Revise

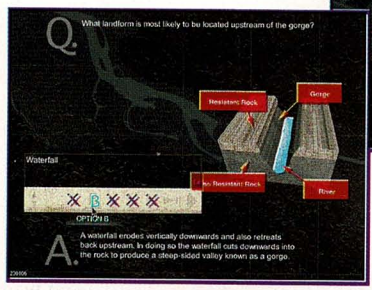
What is it? Interactive demo
Where you'll find it: Demos folder
Mac: 68030
PowerMac: any
Requires: 5Mb RAM, System 7.1, 256 colours

One lot of school children may have taken their GCSEs in June, but those still studying, or preparing to take resits, could benefit from trying Acacia's *Revise* series of educational multimedia. The series covers GCSE course topics in biology, chemistry, geography, mathematics and physics.

They're presented as multiple-choice tests. If you get an answer wrong, you can keep trying until you hit upon the correct one. You are then given some more information explaining the answer, which is useful if it took you several attempts to guess (or work out!) the correct answer. After you've gone through the whole quiz, you're presented with a list of statistics showing how you scored, the average time it took you to answer each question and a comment on your mark.

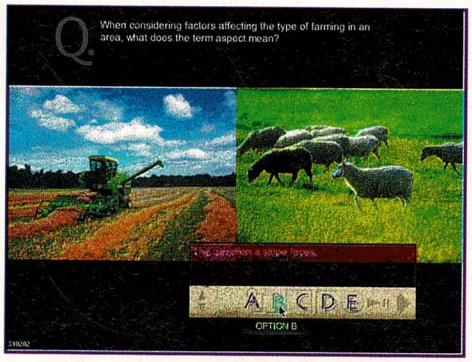
This interactive demo provides you with questions on maths and geography so that you can test your child or even yourself. It's bound to bring back memories of your school days (good or bad). We reviewed *Mathematics* back in MACFORMAT 51.


ACACIA
You scored 3 / 3 or 10 %
If 0.3 marks are added for each question answered correctly on the 2nd attempt, you scored 10 %
Your average time to answer the question was 9.9 secs.
Your average time to review the explanation was 24.1 secs.
A score you can be proud of!
OK


What landform is most likely to be located upstream of the gorge?
Resistant Rock
Gorge
Waterfall
River
OPTION B
A waterfall erodes vertically downwards and also retreats back upstream. In doing so the waterfall cuts downwards into the rock to produce a steep-sided valley known as a gorge.

Right: After taking a test you'll be given a list of statistics showing how well you've done.

Left: Each question is accompanied by helpful diagrams or illustrations.



Left: *Revise Geography's* questions are separated into three sections: basic skills, physical geography and human geography.

Right: When you get the correct answer a full explanation is given, just in case it was a guess.

Turn to page 102 for our review of *Geography*, from the *Revise* series.

To install

The *Revise* demo can be run directly from the CD.

Also on the CD...

Requirements: See individual Read Me files.

■ **Damage Incorporated**
Lead a team of marines against the evil White Night organisation.

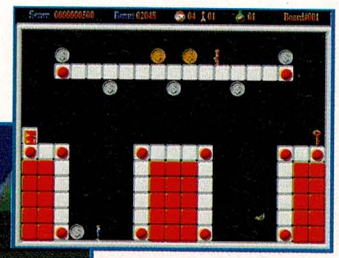
■ **F/A-18 Hornet 3**
Fly an advanced fighter aircraft through a training mission and watch some replays of fancy flying. See our review of the full game on page 108.

■ **Kids Arcade Pak Demo**
This is a collection of arcade classics that's been specially converted for young children.

■ **Last Express preview**
Watch a sneak preview of this animated detective adventure and look behind the scenes to find out how it was all done. There's a review of *The Last Express* on page 110.

■ **Step On It!**
Colourful platformer fun for one or two players in Casady and Greene's latest game.

■ **Terminal Velocity**
Pilot a space-age aircraft over a fully realised 3D landscape. ➤



Above: You can either join forces or play against each other in *Step On It!'s* two-player mode.

Left: Damage Incorporated adds an element of strategy to the classic *Doom* genre.

Got a problem?

Before installing the software from our Cover CD or Floppy Disk, we recommend you always back up any important work on your hard disk. This precaution will avoid problems if it turns out that a program isn't compatible with your particular Mac set-up.

We make every effort to check our Cover Disks for compatibility and viruses, but the information here is intended as a guide only, and MACFORMAT cannot be held responsible for any damage to data, any inability to use this software or any resulting losses. So please, do make sure you back up first.

If your CD-ROM or disk is defective, return it to us via one of the addresses on the right and we will replace it. Please make sure you have followed the installation procedures described in these pages correctly, to ensure that there is a physical problem with the disk itself. Otherwise, the replacement will give you exactly the same problem!

Enclose a self-addressed padded envelope (but we'll pay return postage) with the disk or CD, and a description of the fault. Please do not return disks or CDs to the editorial office; we don't hold any stocks of them and can only refer you to the appropriate address below.

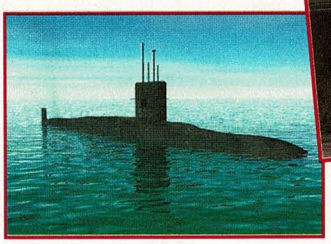
Return faulty CD-ROMs to:
MACFORMAT CD returns
PC Wise Ltd, Dowlais Top Business Park,
Dowlais, Merthyr Tydfil,
Mid Glamorgan,
South Wales C48 2YY.

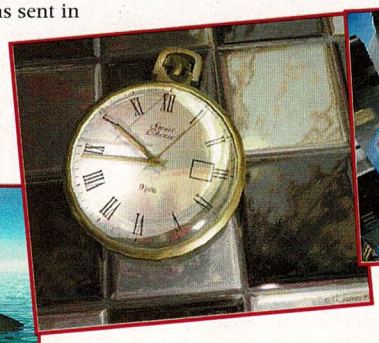
Return faulty HD disks to:
TIB plc, TIB House,
11 Edward Street,
Bradford BD4 7BH.

Readers' corner

Once again, we've been inundated with goodies, so feast your eyes on some excellent artwork and then try out some great utilities and other contributions sent in by MACFORMAT readers.

In the gallery this month you'll find illustrations by Stefano Tartarotti, Manish Sehgal and Glyn Staves. We have also received *Warcraft II* PUDs from John, Tristan and Drummo, as well as loads of game cheats from Svavar Luthersson. Enjoy!





Illustrations by Manish Sehgal (top right and middle right), Glyn Staves (above) and Stefano Tartarotti (left and bottom right)

We want your pics!

If you've created some work, such as artwork, e-zines, icons, Desktop patterns, programs or sounds, that you'd like us to include on the MACFORMAT Cover CD, then send it in to: Brian Smith, Disk Editor, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

Our preferred formats for submissions are floppy disk, CD or 44Mb/88Mb SyQuest carts. Or, if your submission is smaller than 1Mb, you can e-mail it to us as an enclosure at: macformat@futurenet.co.uk

Unfortunately, we are unable to return floppies; enclose an SAE for the return of SyQuests or Zip disks. Please do not include letters for other sections of the magazine as this is likely to delay their reply.

On the floppy

This issue's floppy has *3-D Cannon*, a fun game for one or two players; *URL Manager Lite* for anyone connected to the Internet; and *GoMac*, a Control Panel that helps you manage your utilities and Mac setup options with a Windows 95-style task bar – but better, of course.

3-D Cannon

What is it? Shareware game
Mac: any
PowerMac: any
Requires: System 7.0, 4Mb RAM, 1.3Mb hard disk space, FPU optional

3-D Cannon is a two-player game in which your objective is to knock out the enemy's cannon. You either play against a computer-controlled cannon, which you can set to varying skill levels, or challenge a friend – definitely the best option. You take it in turns to aim and fire your cannons. By adjusting the direction, elevation and force of the shot, you'll eventually hit your target and your opponent's cannon will explode in a shower of polygons!

3-D Cannon is viewed in glorious texture-mapped 3D, but if it's running too slowly, you can turn texture mapping off and reduce the size of the display. If you have an FPU (floating point unit) installed, there's a special version of the game that should speed things up.

URL Manager Lite

What is it? Utility
Mac: any
PowerMac: any
Requires: System 7.0, 600K RAM, 400K hard disk space.

This is a cut-down version of *URL Manager Pro*, which we reviewed in MACFORMAT 49's "Shareware Central". It's a professionally-presented shareware utility that helps you keep track of your URLs (universal resource locators – Web addresses). You build up your own address book of URLs, structured using folders and separator bars like *Netscape* or *Internet Explorer's* bookmarking system. Double-clicking on a URL launches the relevant helper utility, giving you access to that data. You can add all your favourite Internet utilities to *URL Manager's* floating Helper Dock for quick access.

While the *Lite* version is fully usable, *URL Manager Pro* adds other features like closer integration with your other Internet applications and custom bookmark menus. To download the latest shareware version of *URL Manager Pro*, visit **http://www.xs4all.nl/~alco/urlm/** or buy the full version at **http://www.buydirect.com/all/product/detailed/0,3,620,01.html** You can access both sites via the **About URL Manager Lite...** option in the Apple menu.

GoMac

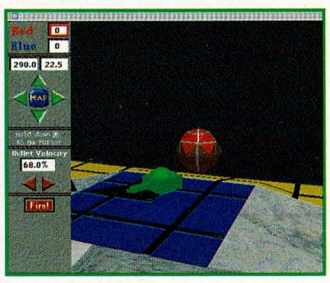
What is it? Shareware Control Panel
Mac: any
PowerMac: any
Requires: System 7.0 (System 7.5 recommended).

GoMac is a tiny Control Panel that gives a face-lift to the Finder. It adds a Windows 95-style task bar to the bottom of the screen through which you can access all your applications and switch between the currently loaded ones; use Control Panels, the **Chooser** and **Extensions Manager;** alter monitor settings and access the contents of all your connected volumes. Phew!

If that's not enough for you, *GoMac* can display the time and there's a handy pop-up calendar. If you don't want it to cover the bottom strip of your screen, you can force it to hide until you move the pointer over it. It's definitely one of the best shareware Control Panels available for the Mac.

Plus

- **CustoFinder 7 1.2.4**
Uncover more of the Finder's hidden features.
- **KidCalc! 0.91**
A fun calculator for kids or the young at heart.
- **StuffIt Expander 4.0.1**
The latest version of Aladdin's freeware de-archiver.
- **WebFree**
Block annoying advertisements, animated GIFs and cookies from your browser.



Look out... incoming!

How to use your disk

High density floppy disks normally contain up to 1.4Mb of software, but so that we can bring you as many useful programs as possible, we use a compression utility to fit more on. This means you need to decompress the software before using our Cover Disk. This issue you'll need 3.1Mb of hard disk space. We also recommend that you always make a back-up of the MACFORMAT Cover Disk, just in case anything goes wrong.

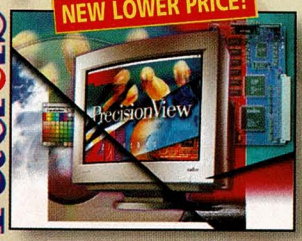
To decompress the Cover Disk contents, open the MACFORMAT 53 folder on your hard disk and double-click on the MACFORMAT 53 icon. You'll see a screen telling you about the compression utility we've used. Click Continue when you're ready.

A dialogue box prompts you to decide where to save the software. Choose the place on your hard disk where you want everything stored and then click Save.

Here Comes Summer
CHECK OUT THE HOT NEWS

radius

NEW LOWER PRICE!



RADIUS PrecisionVIEW 21

A professional colour display for desktop publishing, graphic design, typesetting, multimedia and imaging. With sharp image detail and brilliant colour accuracy for no-hassle colour work Macs, the PrecisionView 21 is a powerful choice for high resolution colour.
Key features include... a 21" DiamondTron tube that offers a dark screen and higher contrast with easy access to all screen settings, three pre-set colour temperatures including true 5000K, NTSC 6500K and 9300K, setting options to any white point setting inbetween.

- Supports resolutions up to 1600 x 1200, in sharp, flicker-free colour.
- Aperture grille technology and 30mm aperture grille pitch
- On-Screen Display provides easy access to all screen settings
- Maximum resolution of 1600 x 1200
- Easy to set-up
- Desktop software for Mac OS, allowing users to switch resolutions and colour bit-depth on-the-fly

GH PRICE ONLY...
£999
Just £7.92 Per Week❖

WACOM

WHY NOT CALL IN FOR A FREE DEMONSTRATION!

REMEMBER ALL WACOMS ARE SUPPLIED WITH FREEHAND GRAPHICS STUDIO FREE! ASK ABOUT OPTIONS WITH PAINTER TOO!

WACOM Graphics Tablets

GH stock a variety of Graphics Tablets including the excellent Wacom range. Using a Wacom is as easy and natural as using a pen - whether you're retouching in PhotoShop or being creative in Painter, you'll appreciate the benefits right away. Put down your mouse and pick up the pressure sensitive Wacom pen and you'll be able to vary line thickness and density - your skills will immediately be enhanced! But, don't just take our word for it, call in and ask for a demonstration to see just how easy Wacoms are to use and see how you can make your Mac EVEN MORE PRODUCTIVE!

SOFTWINDOWS '95 V4.0

One click puts a software PC running inside your Mac, another click & you can work on both Windows 95 & Mac side by side!

£279

GH 15TH ANNIVERSARY 1982-1997

GH is a family business established in 1955. We've been providing systems since 1982 and now with over £50 million worth of units supplied, and a quarter of a million happy customers... Our Trading Record is Second to None!

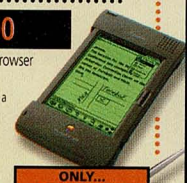
We think we offer the BEST overall deal possible and... because we are appointed and authorised by Apple for our high standard in Hardware Maintenance and Care, YOU can rest assured you'll get the BEST service too!

GH offers you everything!

GH IS NOW HIRING STAFF...

So, if you have a good knowledge of Macintosh products and/or... a technical background with sales experience, please write in the first instance to Gordon Harwood Computers Limited at the address shown below enclosing a current CV.

NEWTON 2000



Including Word Processor, e-mail, WWW Browser and Spreadsheet software.
The new Newton **2000** weighs under a pound and a half (0.64Kg). It has two PC Card Slots into which you can fit modems or a Data Connection Card for GSM Mobile communications.
The new 2000 is up to **TEN TIMES FASTER** than previous models and has more memory. Its larger backlit screen features 16 levels of grey at 100 dpi, there's an internal speaker, an internal microphone and upto 24 Hours OF CONTINUOUS BATTERY LIFE!

ONLY...
£649
Just £5.58 Per Week❖

NEWTON 2000 ACCESSORIES...

2000 Keyboard	£65	Wireless Comms Case (H0181Z/B)	£40
2000 Carry Case (H0218Z/B)	£29	AC Adaptor (H0214Z/A)	£29
2000+Keyboard Carry Case (H0228Z/A)	£65	Battery Pack (H0212Z/A)	£24
		4Mb Flash Upgrade (H0230Z/A)	£89

NEW!

EPSON FilmScan 200 - 35mm Film Scanner

Affordable high quality scanning of 35mm film (negative or positive slides etc.) with an option to add a holder to take Advanced Photo System Cartridges and even batch scanning of up to 6 images simultaneously! The new Epson FilmScan 200 features...

- Fully TWAIN compliant
- Photo enhancement software
- Photo album software
- Optical resolution 1200 x 2400
- Max. output resolution 4800dpi
- Compatible with Mac and PC
- Max. scanning area... 35mm film - 1 frame (24mm x 36mm)
- Advanced film - 1 frame (16mm x 28mm)
- 30-Bit per pixel in colour

GH PRICE ONLY...
£399
Just £3.16 Per Week❖

EPSON STYLUS COLOR 3000

NEW A2 Pre Press Printer

Epson's new large format pre-press printer - ideal for proofing at a fraction of the normal cost you'd expect!
With the 3000 you get both high resolution accuracy AND colour fidelity along with versatility of media size from A4 to A2. Not only that, but consumables are considerably cheaper than dye sublimation printers and so the running costs stay low. Just awarded 4 mice in Mac User, this really is value for money and fills the gap between a 'home' printer and a proofing tool costing many thousands of pounds! Call GH for details.

ONLY...
£1299
Just £11.17 Per Week❖

Showroom GH

visit THE BEST Showroom in the UK

WHY NOT COME AND SEE US... WE'RE AT THE HEART OF THE UK, AN EASY DRIVE FROM MOST AREAS!

We have more products in stock than those listed in our advertisement *(please phone and check about a particular item before making a long journey)* and our staff are happy to offer impartial and friendly advice. Why not call in and see us, we're at the heart of the UK and only around an hour's drive away from Birmingham, Northampton or Manchester. And... even travelling from **London** doesn't take much longer!

If you want to see products for YOUR Apple System, there's no better place to visit than the great GH showroom. LOOK FORWARD TO SEEING YOU HERE.

WHILST STOCKS LAST!

Limited Offer... FREE Global Transfer Software WORTH £26

With every Global Village **TELEPORT 33.6 Internet Edition Data/Fax Modem**

- 33.6bps Data speed, 14.4bps Fax speed
- Inc. Internet and GlobalFax™ software
- Voice/Fax/ARA autocall switching, ideal for 1 phone line

NEW LOWER PRICE **£115**

UMAX Astra 600

NEW!

- Intelligent Scan Driver - Auto scan settings
- Accurate Colour Scans - Magic Match & Kodak Colour System
- Superior 30-Bit Quality - 300x600 Optical dpi (Maximum 4800dpi)
- Large Legal Size Scan Area - 215mm x 355mm
- Umax Copy Utility - Turn your scanner & printer into a copier
- Plug-and-Play Connections - Plug directly to your Macintosh

SCANNER **£169** WITH PHOTOSHOP LE **£189** WITH FULL PHOTOSHOP & TRANSPARENCY ADAPTOR **£468**

NEW! PHONE US FOR FULL DETAILS OF THE NEW LOWER COST POWERLOOK COLOUR STUDIO II RANGE!

NEW!

EPSON STYLUS *Photo* 6 COLOUR PRINTER

- Optimised Photo Quality Colour Reproduction
- Prints 4"x6" Format
- Enlargements to FULL A4
- Macintosh and Windows compatible
- LivePix Photo Editing Software included
- FREE Epson Bonus Paper Pack included
- UNIQUE SIX COLOUR PRINT PROCESS! (CMYK + Light Cyan and Light Magenta)

PRO PHOTO REPRODUCTION QUALITY

£349 Just £2.77 Per Week❖

NEW VERSION

STYLESCRIPT PostScript

If you've been using your inkjet to print EPS graphics, you'll have seen the 'Jaggies' on your printed page. What you need is output quality to match your printer's - without the 'Jaggies'. What you need is PostScript output! That's where new StyleScript will work with many StyleWriter and HP models and now the Epson Stylus 500 too. Call for details.

£79

THE BEST STYLEWRITER DEALS!

THREE Exceptional offers from GH!

SW1500 SAVINGS!

OFFER 1...

Buy either a Performa 5400 or Performa 6400 and add one of two Apple colour inkjet printers for a fraction of their normal selling price...
Choose either a StyleWriter 1500 Color or StyleWriter 2500 Color printer with your new Performa - pay **as little as £99!**

SW2500 BARGAINS!

OFFER 2...

Buy a StyleWriter 2500 (with or without a Performa) before 31st July 1997 and you'll receive a voucher for a

FREE...

Apple Colour PhotoGrade Kit to produce high quality Photo Realistic Images -Worth £47!-

OFFER 3...

Call GH NOW, We Guarantee...

WE WON'T BE BEATEN ON THE PRICE

of this Printer and Photograde Offer!

This advertisement is an invitation to treat, not an offer to sell. Offers are subject to availability. Consumers please ask for VAT inclusive prices. All transactions are subject to Harwood's Terms and Conditions of Sale, a copy of which is available on request. E.&O.E. Software/Product packaging for bundled systems/items may not be included and is shown for illustration purposes only.

gordon harwood computers

01773 836781

PICK UP THE PHONE AND ORDER TODAY FOR DELIVERY TOMORROW

CHECK OUT THIS MONTH'S OFFERS AND LATEST NEW PRODUCTS HERE!

WE'RE EASY TO FIND, SO WHY NOT PAY A VISIT TO OUR SHOWROOM
Please check availability before making a long journey

INSTANT FINANCE AVAILABLE TO PERSONAL CALLERS AND BUSINESS USERS (subject to status). See next page for full details ♦.

We accept most major Credit and Debit Cards and there are NO SURCHARGES!

MasterCard · AMERICAN EXPRESS · VISA · SWITCH · Creditchoice · DELTA

For your protection all Cards are fully Security Checked

OFFICIAL ORDERS...
We supply Central, Local Government and Education Departments along with Major PLCs

'FAST-FAX'...
on 01773 831040 for a Rapid Response to your Quotation or Order Requirements!

GH™
GORDON HARWOOD COMPUTERS

DEPT MAF/11 • NEW STREET
ALFRETON • DERBYSHIRE
DE55 7BP
Tel: 01773 836781
FAX: 01773 831040
e-mail: info@ghc.co.uk

gordon computers **harwood**

GH™

We've been building our reputation for the last 15 years... and our Apple accreditations support this.

Authorised Reseller

Authorised Service Provider

Commercial Credit Provider

Newton Centre

Authorised Higher and Further Education Alliance Reseller

- KEENEST PRICES
- ASSURED SERVICE
- ESTABLISHED 1982
- APPLE APPOINTED
- WARRANTY OPTIONS
- SPEEDY DELIVERIES
- FRIENDLY STAFF
- CENTRAL TO UK
- FINANCE OPTIONS

GH PERSONAL FINANCE †
INCLUDING AN OPTION WITH NOTHING TO PAY UNTIL WINTER!

PERSONAL FINANCE - DEFERRED PAYMENT PLAN◆ FOR INDIVIDUALS VISITING OUR SHOWROOMS AND PAYING A MINIMUM OF 10% DEPOSIT

OPTION 1: BALANCES OVER £2000: PAY NOTHING MORE FOR 6 MONTHS OR,

OPTION 2: BALANCES OVER £1200: PAY NOTHING MORE FOR 4 MONTHS OR,

OPTION 3: UNLIMITED BALANCES OVER £500: CHOOSE OUR 'LOW COST' FIXED TERM PERSONAL LOAN, 24.9% APR OVER 2 YRS, OR 21.9% APR OVER 3 YRS - a Lower Cost alternative 2 or 3 year agreement, for those who wish to spread the cost over a longer period than 4 or 6 months.

OPTIONS 1 & 2 - During the deferred period you can settle IN FULL (without finance charges) or... continue agreement with normal interest arrangements (ie. Direct Debit 27.8% APR, 2.07% Per Month or Payment Book 32.4% APR, 2.37% Per Month). For the first 4 or 6 months you'll also receive FREE Agreement Life Cover

Written details available on request. †Subject to status and an £18 arrangement fee. Please contact us prior to visiting for Easy Application requirements.

GH BUSINESS FINANCE...

BUSINESS FINANCE: Weekly rates shown exclude VAT and are based on a fixed cost 3 Year Apple Commercial Credit Lease payable quarterly after an initial deposit payment. Available to all businesses (including recently established) making a minimum total purchase of £750 - *subject to status. FULL Details available on request.*

GH BUDGET ACCOUNT...

If you can't visit us personally, why not ask for an Application Pack to request a convenient, flexible GH BUDGET ACCOUNT CARD. No deposit finance can be arranged by mail. Once established, you can purchase with your new card leaving your existing credit card limits intact.

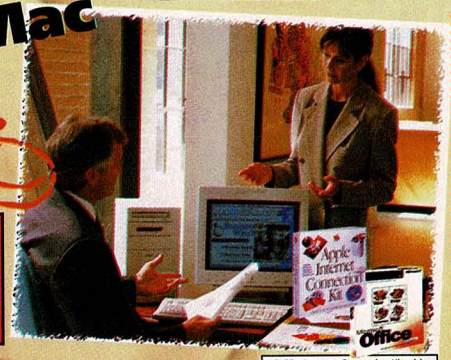
Harwood's Sizzling Summer Specials...

pay Just 10% Deposit then Nothing until WINTER

GH™ GH 15TH ANNIVERSARY 1982-1997

PowerMac PowerPC MAC computers

FROM... £649 Just £5.13 Per Week◆



FREE... Internet Connection Kit with ALL Power Macs and Microsoft Office FREE with... 7300, 7600 and 8200 Power Macintosh models!

Model	MHz	CPU	RAM	DRIVE(S)	CD	Ethernet	Display	Graphics	Keyboard	Price
4400/160	160	603e	16	1.2Gb	✔8	✘	✘	Inbuilt	Design	**£649**
4400/160	160	603e	16	1.2Gb	✔8	✘	15" M/S	Inbuilt	Design	**£869**
4400/200	200	603e	16	1.2Gb	✔8	✘	✘	Inbuilt	Design	**£899**
4400/200	200	603e	16	1.2Gb	✔8	✘	15" M/S	Inbuilt	Design	**£1099**
4400/200	200	603e	16	2Gb	✔8	✔	✘	Inbuilt	Design	**£1049**
4400/200	200	603e	16	2Gb	✔8	✔	15" M/S	Inbuilt	Design	**£1249**
7300/166	166	604e	16	2Gb	✔12	✔	✘	Inbuilt	Extended	**£1499**
7300/200	200	604e	32	2Gb	✔12	✔	✘	Inbuilt	Extended	**£1799**
8200/120	120	601	16	1.2Gb	✔8	✔	✘	Inbuilt	✘	**£899**
8600/200	200	604e	32	2Gb + ZIP	✔12	✔	✘	Inbuilt	Extended	**£2199**
9600/200	200	604e	0	0Gb	✔12	✔	✘	✘	Extended	**£1799**
9600/200	200	604e	32	4Gb	✔12	✔	✘	✔IMS	Extended	**£2499**
9600/2x200	2x200	604e	32	4Gb	✔12	✔	✘	✔IMS	Extended	**£3199**
9600/233	233	604e	32	4Gb	✔12	✔	✘	✔IMS	Extended	**£2849**

POWERMAC OPTIONS...

ETHERNET 10 BaseT (RJ45), 7" PCI Expansion Card **£85**

ETHERNET 10 BaseT and 10 Base2 (Thin Coax), 7" PCI Card **£108**

256k Cache DIMM (75/85/9500) **£76**

512k Cache DIMM (75/85/9500) **£97**

Apple Pentium 166MHz, 16Mb DOS Card for PCI Macs **£649**

CUSTOMISED POWERMACS Listed are standard models, we can add extra memory, drives, accelerators, graphics cards etc.

MACCELERATE

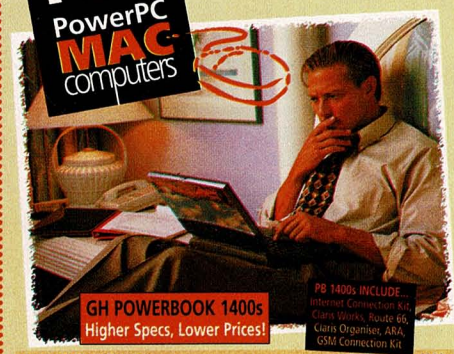
Unlike many 'go-faster' upgrades which overspeed the standard processor, Maccelerate™ is a replacement for your Mac's original processor/daughterboard using the new faster 604e CPU with 2 integral 32k caches. Performance gains are massive - MAC USER RATED...

Mac User ★★★★★ Mac User

For PowerMac 7500, 7600, 8500 & 9500s

150MHz MacCelerate **£249**
180MHz MacCelerate **£329**
200MHz MacCelerate **£449**

PowerBook PowerPC MAC computers


GH POWERBOOK 1400s
Higher Specs, Lower Prices!
PB 1400s INCLUDE... Internet Connection Kit, Claris Works, Route 66, Claris Organiser, ARA, GSM Connection Kit

1400cs/117 12/750, DS	**£999**
1400cs/117 12/1000, DS	**£1149**
1400cs/117 16/750, DS, CD	**£1199**
1400cs/117 16/1000, DS, CD	**£1349**
1400cs/117 16/750, DS, CD, StyleWriter 2200, Carry Case	**£1399**
1400cs/117 16/1000, DS, CD, StyleWriter 2200, Carry Case	**£1499**
1400cs/133 16/1300, DS, CD	**£1799**
1400c/133 16/1100, AM, CD	**£2049**
1400c/133 16/1300, AM, CD	**£2199**
3400c/180 16/1300, AM	**£2699**
3400c/180 16/1300, AM, 12 Speed CD, Ethernet	**£2999**
3400c/200 32/2000, AM, 12 Speed CD, Ethernet, inc. SoftWindows 3.11	**£3499**
3400c/240 16/3000, AM, 12 Speed CD, Ethernet	**£3999**

POWERBOOK OPTIONS...

Accessories also available for earlier PBs inc.150/190/5300

1400 8 Speed CD-ROM	**£249**	**1400** 8Mb Upgrade	**£65**
1400 ZIP Drive VST	**£219**	**1400** 16Mb Upgrade	**£119**
1400 Car Adaptor VST	**£79**	**1400** 24Mb Upgrade	**£159**
1400 AC Adaptor	**£39**	**3400** 12 Speed CD-ROM Module	**£239**
1400 Battery	**£69**	**3400** Lithium Ion Battery	**£129**
1400 TDK 28.8 Fax/Modem	**£229**	**Sony** Portable CD Player & PCMCIA Adaptor	**£309**
1400 8-Bit Video Out Card	**£70**	**PowerBook Carrycases**	*from* **£25**

MEMORY

RAM	4Mb	8Mb	16Mb	32Mb	64Mb
SIMMs	£CALL FOR BEST PRICES!				
DIMMs	£CALL FOR BEST PRICES!				

8/16/32/64Mb EDO DIMM UPGRADES AVAILABLE PLEASE CALL

Displays MAC

GH Budget 14" Multisync (.28)	**£189**
GH 15" Multisync (.28)	**£239**
Apple 15" Multiscan (.28)	**£289**
Apple 15" AV Multiscan (.28)	**£299**
Apple 17" 1705 TCO MultiScan (.26)	**£399**
Apple 17" 1710 TCO Trinitron MultiScan (.26)	**£499**
Apple 17" 1710AV TCO Trinitron MultiScan (.26)	**£549**
Apple 20" Trinitron MultiScan II (.26)	**£1129**
Mitsubishi 15" Shadow Mask HX Multisync (.28) Including 3 Year Warranty	**£259**
Mitsubishi 17" Diamondtron TXV Multisync (.25) Including 3 Year Warranty	**£425**
Mitsubishi 17" Diamondtron TXM Multisync (.25) Including 3 Year Warranty	**£489**
Mitsubishi 21" Diamondtron TXM Multisync (.28) Including 3 Year Warranty	**£1029**
Sony 15" 100SX Trinitron Multisync (.25)	**£259**
Sony 15" 100SFT Trinitron Multisync (.25)	**£299**
Sony 17" 200SX Trinitron Multisync (.25)	**£439**
Sony 20" 300SFT5 Trinitron Multisync (.30)	**£979**
Formac 17" F17 FST Multisync (.26)	**£339**
Formac 17" ProNitron F17 400 Trinitron Multisync (.26)	**£449**
D2 21" Electron 21 (.28) Including 3 Year On-Site Warranty	**£1129**
Taxan 21" Diamondtron (.28)	**£1049**
Radius Precision View 21" Diamondtron (.28)	**£999**

GH Prices **INCLUDE Adaptors** for all Monitors **FREE!**

DISPLAY OPTIONS...

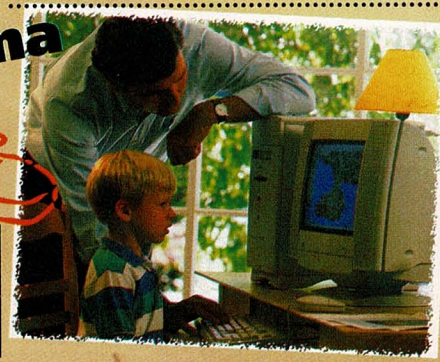
Video and Graphics Cards...

I.M.S. Twin Turbo 4Mb Card with 5 Year Warranty	**£269**
I.M.S. Twin Turbo 8Mb Card with 5 Year Warranty	**£399**
Formac ProVision 2/40 (4Mb, 64 Bit, Half Length)	**£119**
Formac ProVision 4/60 (4Mb, 128 Bit, Half Length)	**£239**
Formac ProFormance 40 (4Mb, 128 Bit, Accelerated, Half Length)	**£299**
Formac ProFormance 80 (8Mb, 128 Bit, Accelerated, Half Length)	**£349**
Miro Motion DC20 Video Editing Card (Adobe Premiere 4.2)	**£Call**
Miro Motion DC30 Video Editing Card (Adobe Premiere 4.2)	**£799**
Miro Motion DV100 Video Editing Card	**£499**

VRAM Upgrades...
To give even higher screen resolutions and more colours etc. **£CALL**

Performa PowerPC MAC computers

FROM... £699 Just £5.55 Per Week◆



Model	MHz	CPU	RAM	HD	CD	Display	TV/Text	Video	MPEG	Modem	Keyboard	Price	Software Pack
PF5260	120	603	12	1.2Gb	✔8	14" Integral	✘	✘	✘	✘	Design	**£749**	CLARIS WORKS
PF6320	120	603	12	1.2Gb	✔8	✘	✘	✘	✘	✘	Design	**£699**	DISNEY PLUS 3
PF6320	120	603	12	1.2Gb	✔8	15" M/S	✘	✘	✘	✘	Design	**£899**	DISNEY PLUS 3
PF6320	120	603	12	1.2Gb	✔8	15" AV M/S	✘	✘	✘	✘	Design	**£979**	DISNEY PLUS 3
PF5400	160	603e	16	1.6Gb	✔8	15" Integral	✘	✘	✘	✔28.8	Design	**£879**	FAMILY PACK
PM5400	180	603e	16	2.0Gb	✔8	15" Integral	✘	✘	✘	✔28.8	Design	**£999**	FAMILY PACK
PF5400 Black Mac	180	603e	16	1.6Gb	✔8	15" Integral	✔	✔	✘	✔28.8	Design	**£1189**	FAMILY PACK
PM5500 Black Mac	225	603e	32	2.0Gb	✔12	15" Integral	✔	✔	✘	✔33.6	Design	**£1549**	FAMILY PACK
PF6400	180	603e	16	1.6Gb	✔8	✘	✘	✘	✘	✔28.8	Design	**£849**	HOME OFFICE
PF6400	180	603e	16	1.6Gb	✔8	15" AV M/S	✘	✘	✘	✔28.8	Design	**£1099**	HOME OFFICE
PF6400	200	603e	16	2.4Gb	✔8	✘	✘	✘	✘	✔28.8	Design	**£999**	HOME OFFICE
PF6400	200	603e	16	2.4Gb	✔8	15" AV M/S	✘	✘	✘	✔28.8	Design	**£1249**	HOME OFFICE
PM6400	200	603e	16	2.4Gb	✔8	15" AV M/S	✘	✘	✘	✔28.8	Design	**£1279**	HOME OFFICE
PF6400	200	603e	24	2.4Gb	✔8	✘	✔	✔	✘	✔28.8	Design	**£1369**	CREATIVE STUDIO
PF6400	200	603e	24	2.4Gb	✔8	15" AV M/S	✔	✔	✘	✔28.8	Design	**£1625**	CREATIVE STUDIO
PM6500	250	603e	32	3.0Gb	✔12	✘	✘	✘	✘	✔33.6	Design	**£1379**	HOME OFFICE
PM6500	250	603e	32	3.0Gb	✔12	15" AV M/S	✘	✘	✘	✔33.6	Design	**£1649**	HOME OFFICE
PM6500	275	603e	32	4.0Gb	✔12	✘	✔	✔	✘	✔33.6	Design	**£1949**	CREATIVE STUDIO
PM6500	275	603e	32	4.0Gb	✔12	15" AV M/S	✔	✔	✘	✔33.6	Design	**£2149**	CREATIVE STUDIO

FAMILY Pack...
- Grolier Multimedia Encyclopaedia • DK's Ultimate Human Body • Sammy's Science House • Thinkin' Things 3 • Full Throttle • PowerPete • The Best of European Soccer • Claris Works • HyperCard Player • Acrobat Reader • MacLink Plus • At Ease • Apple Internet Connection Kit • Apple Telecom 3.0

PLUS... • The Apple Magic Software Collection by Disney

AND... **with all 5400's and 6400's... • Descent**

AND... **with 5500/225's... • Actua Soccer and • KAI's Power Goo**

HOME OFFICE Pack...
• Items in FAMILY pack *PLUS...* • Claris Impact and... • Claris Organiser!

AND... **with 6500/250 • Actua Soccer**

CREATIVE STUDIO Pack...
• Items in the FAMILY pack *PLUS...*
• KAI's Power Goo • Avid Cinema • Cubase AV • Dabbler • Adobe PageMill and PhotoDeluxe

AND... **with 6500/275 Creative Studio...**
• **3D World** • **ClickArt** • **Actua Soccer**

DISNEY Plus 3 Pack...
• Grolier Multimedia Encyclopedia • Millie's Math House • Thinkin' Things 2 • Mavis Beacon • SuperMaze Wars • Spin Doctor • At Ease • Claris Works 3 • ClickArt • HyperCard Player • MacGallery

ALL PRE-INSTALLED ON HD. *PLUS on CD ROM...*
• Making Music • The Way Things Work • Daedalus Encounter • Rock Rap & Roll • RedNex • MYST

AND... • Disney's Lion King Story Book • Aladin Activity Centre • TOY STORY (Preview) • Internet Connection Kit

PERFORMA 630, 5200, 5260, 5300, 5320, 6200, 6300 and 6320 OPTIONS...
- **Personal COMMS Solution** *(models without Ethernet)* FAX, Internet and Answer Phone facility, etc... **14.4** version **£89** **28.8** version **£149**
- **Ethernet Cards** *(models without Personal Comms)* **Thin Co-Ax £59 UTP £59 AUI** (requires adaptor) **£59** • **Apple** Internet Connection Kit **£47**
- **Apple** Video Out Card **£99** • **MPEG** FMV Video CD Playback Card *(only fits 630 models without a DOS Card)* **£175** • **D2** FM Radio Tuner **£59**

PERFORMA 5400 and 6400 OPTIONS...
• **Apple** Video-In Card **£69** • **Apple** Video-In TV Tuner Card **£129** • **Apple** COMMS Slot II Ethernet Card **£75** • **Apple** 256K Level 2 Cache Card **£75**

Manufacturers' specifications and GH prices are correct at time of going to press; however, they may fluctuate and we therefore reserve the right to amend them - please confirm prices before ordering. Software/Product packaging for bundled systems/items may not be included and is shown for illustration purposes only.

PRINTERS

LASER PRINTERS...

APPLE LaserWriter 4/600PS - A4, 600 dpi Mono £575
APPLE LaserWriter 12/640PS - A4, 600 dpi Mono £999
APPLE LaserWriter 16/600 - A4, 600 dpi Mono £1399
APPLE LaserWriter 12/660PS - A4, 600 dpi Colour £4499
HP LaserJet 6MP - A4, 600 dpi Mono, 3Mb RAM, 8ppm. Features both Parallel and Local Talk Connections £649
LEXMARK Optra R+ Pro - A4, 1200 x 1200dpi Mono, 8Mb, LocalTalk, 16ppm at 600dpi or 8ppm at 1200dpi, On-Site Maintenance £1199
GCC Elite 12/12 - A4, 16Mb RAM, Edge to Edge, Ethernet £1099
GCC XL608 - A4, 6Mb RAM, 600x600 dpi, Edge to Edge, Ethernet £1899
Techtronix Phaser 350 £2699
Techtronix Phaser 550 Laser £3299
QMS MagiColor CX8 - A4, 600dpi Mono, 300dpi Colour, 8Mb, LocalTalk, 12ppm Mono, 6ppm Colour £3599
QMS MagiColor CX40 - A4, 1200 x 1200dpi, 40Mb, LocalTalk, 12ppm Mono, 6ppm Colour £4599

COLOUR INKJET PRINTERS...

APPLE StyleWriter 1500 720 x 360dpi **(See offer - Page 1 from £99)**
APPLE StyleWriter 2500 720 x 360dpi **(See offer Page 1 from £149)**
APPLE StyleWriter EtherTalk Kit £145
CANON BJC4550 Colour - A3 Mac or Amiga £309
EPSON Stylus Colour 600 - Colour - A4 1440 x 720dpi £229
EPSON Stylus Colour 800 - Colour - A4 1440 x 720dpi £329
EPSON Stylus Colour Pro - Colour - A4 720 x 720dpi £289
EPSON Stylus Pro XL+ - Colour - A3 720 x 720dpi £699
EPSON Stylus Photo - Unique SIX Colour - 6" x 4" up to A4 £349
EPSON Stylus Colour 1520 - Colour - A2 1440 x 720dpi £599
EPSON Stylus Colour 3000 - Colour - A2 1440dpi £1299
HP 870Cxi DeskJet - Colour 600 x 600dpi £299
LEXMARK 4079+ - A3, 360 dpi Colour, 4Mb, PS2, LocalTalk £2149
LEXMARK 4079+ Pro - A3, 360 dpi Colour, 20Mb, PS2, L/Talk £2389

PRINTER UTILITIES...

POWERPRINT - Allows use of parallel printers with your Mac £79
STYLESCRIPT - Adobe PS RIP for Apple Colour StyleWriters £79
BIRMY PostScript RIP - for Stylus Pro/Pro XL+ £175
EPSON PS RIP - for new Stylus 800/1520 range £99

PRINTER CONSUMABLES

APPLE STYLEWRITER...

I, II, Portable, 1200, 1500 (M8041G/A) Black Cartridge £14
1500 (M4609G/A) Colour Cartridge £23
2400, 2500 (M3240G/A) Black Cartridge £26
2400, 2500 (M3328G/A) Colour Cartridge £33
2400, 2500 (M3330G/A) Black Ink Tank £7
2400, 2500 (M3329G/A) Colour Ink Tank £13
2500 (M5577M/A) Photograde Kit £47
2500 (M5581G/A) Premier Plus Paper £29
2500 (M5579G/A) Photograde Ink Cartridge £25
Colour StyleWriter Pro (M3822G/A) Black Hi-Capacity Cartridge £8
Colour StyleWriter Pro C, M, or Y Cartridge ea. £8
Colour StyleWriter Pro CMYK - 4 Col Set Cartridges £38

EPSON...

Stylus 500/600 (S020093) Black Cartridge £15
Stylus 500 (S020097) Colour Cartridge £24
Stylus II (S020047) Black Cartridge £14
Stylus II (S020049) Colour Cartridge £20
Stylus Pro XL, Pro XL+ (S020034) Black Cartridge £11
Stylus Pro XL (S020036) Colour Cartridge £24
Stylus XL+ (S020066) Colour Cartridge £29
Stylus 400/600/800/1520 (S020089) Colour Cartridge £16
Stylus 800/1520 (S020108) Black Cartridge £15
Stylus A4 Paper (S041059) 360dpi Paper, 100 Sheets £10
Stylus A4 Paper (S041061) 720/1440dpi Paper, 100 Sheets £12
Stylus A4 Paper (SE410011) Transfer Paper, 10 Sheets £13
Index Cards (S041054) 50 Cards, A6 Size £8

GENUINE APPLE Toner Cartridges

LaserWriter 300, 320, 4/600 (M2045G/A) £45
LaserWriter LC, SC, NTR (M0089LL/A) £55
LaserWriter Select 360 (M1960G/A) £69
LaserWriter 12/640 (M4683G/A) £89
LaserWriter 16/600 (M2473G/A) £79

GENUINE APPLE Colour LaserWriter Consumables

Fuser Oil (M3755G/A) £29
Black Toner (M3756G/A) £77
Colour Toner - C, M, or Y ea. £89
CANON BJC 4550 and HP PRINTER CONSUMABLES £Please Call

CAMERAS

AGFA ePhoto 307 Camera, 640 x 480, 36 Hi-Res Images £254
CASIO QV-10a Camera, 320 x 240, 96 Images, Flash £289
CASIO QV-100a Camera, 640 x 480, 96 Images, Flash £399
CASIO QV-300a Camera, 640 x 480, 96 Images, Flash £499
APPLE QuickTake 200 Camera, 640 x 480, 30 Images, Flash £399
APPLE QuickTake Lens QuickTake 100 to QuickTake 150 upgrade Lens £25
KODAK DC20 Camera, 494 x 373, 1Mb, 16 Images, Kai's GOO! £159
KODAK DC25 Camera, 494 x 373, 2Mb, 29 Images, Flash, Kai's GOO! INC. £100 VOUCHER for 2Mb PCMCIA Card **FREE!** - VALID TO 15th JUNE '97 £319
KODAK DC50 Camera, 756 x 504, 1Mb, 22 Images, Flash, Zoom £459
KODAK DC120 Camera, 1280 x 960, 2Mb, 20 Images, Flash, Auto Focus Zoom £749
CONNECTIX QuickCam Colour 640 x 480 £149
ADOBE Photo Deluxe Software to edit/manipulate your camera images £74

SCANNERS

EPSON FILMSCAN 200 - 35mm Slide Scanner, Neg/Pos, Batch Scan, Fully Twain Compliant, 1200x2400 Resolution, Inc. Software, £399
UMAX Astra 600s - 30 Bit £169
UMAX Astra 600s - 30 Bit - with Photoshop LE £189
UMAX Astra 600s - 30 Bit - Transparency Adaptor/Full P'shop £468
UMAX Vista S12 £325
UMAX Vista S12 - with Photoshop LE £349
UMAX Vista S12 - with Full Photoshop £449
UMAX Vista S12 - with Transparency Adaptor/Full Photoshop £749
UMAX PowerLook Colour Studio II - P'shop LE, Binuscan, FGSII £749
UMAX PowerLook Colour Studio II - Full P'shop, Binuscan, FGSII £899
UMAX PowerLook 2000 - with Transp. Adap/BinuScan/Full P'shop £2799
UMAX Mirage II A3 - with Transparency Adaptor/Full Photoshop £4999
UMAX Vista Transparency Adaptor £325
UMAX Astra Transparency Adaptor £199
UMAX PowerLook Colour Studio II Transparency Adaptor £250
TEXTBRIDGE Purchased with ANY Umax scanner £39
UMAX S6e and S12 - Upgrade to 2 Year Warranty £30
UMAX S6e and S12 - Upgrade to 3 Year Warranty £50
MICROTEK ScanMaker E3 - with Omnipage £149
MICROTEK ScanMaker E3 - with Omnipage/Photoshop LE £179
MICROTEK ScanMaker E3 - with Omnipage/Full Photoshop £279
MICROTEK ScanMaker E6 - with Omnipage £329
MICROTEK ScanMaker E6 - with Omnipage/Photoshop LE £369
MICROTEK ScanMaker E6 - with Omnipage/Full Photoshop £449
EPSON GT 5000 - with TextBridge/Photoshop LE £239
EPSON GT 9500 - with TextBridge/Photoshop LE £499
EPSON GT 9500 - with Full Photoshop £599
EPSON Transparency Adaptor - (except 9500) £399
AGFA SnapScan - with PhotoImpact and Omnipage £169
AGFA StudioScan II Si - with Photoshop LE £390
AGFA StudioStar - with Photoshop LE and Omnipage £550
AGFA DuoScan - with Transparency Adaptor/Full Photoshop £2795
VISIONEER PaperPort VX - with SCSI Adaptor & WordScan/OCR £199
VISIONEER PaperPort VX - SCSI Adaptor £49
FOUR PORT JUGGLER - for PaperPort/Modems £See Accessories

GRAPHICS TABLETS

WACOM ArtPad II - with Dabbler £99
WACOM UltraPad A5 - inc. Freehand Graphics Studio £209
WACOM UltraPad A4 - inc. Freehand Graphics Studio £319
WACOM UltraPad A3 - inc. Freehand Graphics Studio £499
WACOM UltraPad A2 - inc. Freehand Graphics Studio £1249
CALCOMP - Drawing Slate II - A6 with Cordless Pressure Pen £85
CALCOMP - Drawing Slate II - A5 with Cordless Pressure Pen £119
CALCOMP - Drawing Slate II - A4 with Cordless Pressure Pen £279
CALCOMP - Drawing Slate II - A3 with Cordless Pressure Pen £419

Call for Wacom Tablets WITH Painter BUNDLES!

STORAGE

D2 QUANTUM Hard Drive 2.1Gb - Internal £219 External £249
D2 QUANTUM Hard Drive 3.0GbAV - Internal £279 External £319
D2 IBM Hard Drive 4.0GbAV - Internal £399 External £479
D2 QUANTUM Hard Drive 6.0GbAV - Internal £469 External £529
D2 QUANTUM Hard Drive - 9.0Gb Internal (Atlas II AV) £999
D2 QUANTUM Hard Drive - 9.0Gb External (Atlas II AV) £1049
SYQUEST EZ135 Cartridge £15
SYQUEST EZ230 Drive - Including Cartridge & Cable £139
SYQUEST EZ230 Cartridge - Single £20 6 PACK £108
IOMEGA 100Mb ZIP Drive - Including Cartridge & Cable £99
IOMEGA ZIP Cartridge - 100Mb - Single £10 6 PACK £54
D2 JAZ Drive - Including Cartridge & Cable £299
IOMEGA JAZ Drive - Including Cartridge & Cable £329
IOMEGA JAZ Cartridge - 1Gb - Single £59 3 PACK £175
NOMAI/D2 540Mb 3.5" Syquest Drive - Inc. Cart. & Cable £209
NOMAI/D2 540Mb Syquest Cartridge £39
FORMAC 200Mb Syquest Drive - Including Cartridge & Cable £349
SYQUEST Cartridge - 44Mb £28 **SYQUEST Cartridge** - 88Mb £30
SYQUEST Cartridge - 200Mb £45 **SYQUEST Cartridge** - 270Mb £34
D2 230Mb Optical Drive - Including Cartridge & Cable £249
OPTICAL DISK - 230Mb £10
PINNACLE 2.6Gb Optical Drive - Inc. Cartridge & Cable £849
SONY/D2 CD Writer - Double Speed Write, Six Speed Read. Includes... your choice of Toast or Gear Software £349
YAMAHA/D2 CD Writer - Quad Write, Six Read, Toast or Gear £479
PINNACLE RCD 5040 CD Writer - Including Software £599

CD DRIVES

D2 CD1200e - EIGHT speed including cables £139
D2 CD1800e - TWELVE speed including cables £159
D2 CD2400e - SIXTEEN speed including cables £199
MICRONET CD1200e - EIGHT speed inc. 5 Software Titles £189
MICRONET CD2400e - SIXTEEN speed inc. 5 Software Titles £199

NEW PRODUCTS & EVEN GREATER SAVINGS are marked thus!

COMMS

APPLE 28.8 GeoPort II - for POWERMACS £109
APPLE 28.8 Personal COMMs Solution - 28.8bps (for... 630/5200/5260/5300/5320/6200/6300/6320) £149
LASAT 33.6 - Apple Modem £89
MOTOROLA 28.8 3400 Pro - V34 WHILE STOCKS LAST £89
MOTOROLA 56.0 Apple Voice Modem £179
MOTOROLA 33.6 PCMCIA - for Apple/PC £135
MOTOROLA ISDN BitSurfer Pro - Terminal Adaptor £299
US ROBOTICS Sportster Voice - 33.6 £119
GLOBAL VILLAGE TelePort Internet - 9 Pin Serial 33.6 ***INCLUDING FREE GLOBAL TRANSFER SOFTWARE*** £115
GLOBAL VILLAGE TelePort Internet - 8 Pin Serial 33.6 ***INCLUDING FREE GLOBAL TRANSFER SOFTWARE*** £115
FAX FRIEND - Auto switch between FAX/Voice calls £49
VOCALTEC Internet Voice Phone - for Macs £39
APPLE Internet Connection Kit - software suite compatible with ALL Modems £47
GLOBAL TRANSFER- The EASIEST direct file transfer software for use between ALL Macs and ANY Modem - child's play! £26

ACCESSORIES

THIRD PARTY Extended Keyboard £40
APPLE Design Keyboard £59
APPLE Extended Keyboard £89
APPLE Adjustable Keyboard £139
APPLE Design Powered Speakers II £49
SONY - Speakers... PC21 £29, PC41 £49, PC51 £55
APPLE Mouse II £28
KENSINGTON V5 Turbo - Mouse £68
KENSINGTON Thinking - Mouse £51
KENSINGTON Mouse in a Box £28
MACALLY Mouse £17
MACALLY Joystick £32
MACALLY GamePad £22
FLIGHTSTICK Pro - Joystick £68
GRAVIS FireBird - Joystick £85
JETSTICK - Joystick £38
FOUR PORT JUGGLER - extra ports for 8 Pin Macs (not PPCs) £89
FOUR PORT JUGGLER PRO - extra ports for 9 Pin PowerMacs £115
APPLE ONE YEAR ON-SITE MAINTENANCE - for NEW products £15

BOOKS

MAC - Frequently Asked Questions £16
CLARIS WORKS BIBLE £23
FILEMAKER PRO 3 BIBLE £29
PHOTOSHOP 4 BIBLE £38
SYSTEM 7.5 FOR DUMMIES £16
QUARK XPRESS BIBLE £32
CREATING COOL WEB PAGES £16
INTERNET FOR DUMMIES £16

SOFTWARE

Call for our FREE Software and Accessories brochure now!

GRAPHICS...

QUARK Xpress 3.3 £649
QUARK Imedia £689
ADOBE PageMaker 6.5 £399
ADOBE Illustrator 7 £279
Illus. 7 Upgrade (from any version) £99
FRACTAL PAINTER 5 £249
ADOBE PhotoShop 4.0 £399
ADOBE Collection £549
KPT/METATOOLS Actions £44
ALIEN SKIN Eyecandy 3.0 £59
METATOOLS Soap £49
KAI's Power Tools 3.0 £95
KPT Vector Effects £89
KPT Power Photos - 1, 2 or 3 ea. £89
KPT Convolver £89
KPT Bryce II £139
KAI's GOO £42
FREEHAND 7 inc. PowerPack £309
FREEHAND 7 Graphics Studio £429
COREL Draw - Upgrade to Suite £99

UTILITIES...

SPRING CLEANING £26
NORTON Utilities 3.5 £74
AFTER DARK 4 - CD £16
APPLE System 7.5.5 - CD/3.5" £59
APPLE System 7.6 - CD £55
ADOBE ACROBAT PRO £159
DANTZ Retrospect 3 £69
CONFLICT CATCHER £52
DR SOLOMON'S - Anti Virus £54
VIREX - Anti Virus £59
SAM £54
SAM (On-Line Updates for 1Year) £109
RAM DOUBLER 2.0 £35
SPEED DOUBLER 2.0 £35
STUFFIT Deluxe 4.0 £66

LEISURE...

ACTUA SOCCER £25
SIM CITY 2000 - CD Collection £33
WARCRAFT II £28
WARCRAFT II Expansion £16
INDY CARS II £14
FA18 HORNET V2.0 £43
NASCAR RACING £24
WING COMMANDER IV £37
VIRTUAL POOL £26
MARATHON INFINITY £36

BUSINESS...

CLARIS Works 4 £94
CLARIS Works 4 Internet Edition inc. HomePage 2, NetScape 3 etc. £75
CLARIS Works to MS Office u/g £179
CLARIS E'M@iler 2.0 £42
CLARIS Organiser 2.0 £59
CLARIS Draw £95
CLARIS Impact £95
CLARIS Filemaker Pro 3 £159
CLARIS Home Page 2.0 £69
MICROSOFT Office 4.2 £359
MICROSOFT Word 6.0 £245
MICROSOFT Excel 5.0 £245
M.Y.O.B. V6.0 - Accounts £149
MAC MONEY £62
SOFTWINDOWS 3.0 - CD/3.5" £225
SOFTWINDOWS '95 V4.0 - CD £279
HYPERCARD 2.3.1 £94
LET'S KEEP IT SIMPLE - S/Sheet £98

EDUCATION...

CREATIVE WRITER/FINE ARTIST £39
ENCARTA '97 £39
GROLIERS Encyc. Science/Fiction £30
DORLING KINDERSLEY...
Virtual Reality Earth Quest £19
20th Century Chronicle £24
The Way Things Work 2.0 £24
Encyc. of Space & Universe £24
Ultimate 3D Skeleton £18
Ultimate Human Body 2.0 £24
Virtual Reality Cat £19
Virtual Reality Bird £19
Virtual Reality Dinosaur Hunter £19
Encyclopaedia of Science 2.0 £24
World Reference Atlas £30
THINK AND TALK... GERMAN, ITALIAN, SPANISH or FRENCH ea. £44
READING DEVELOPMENT... Series 1, Series 2, Series 3 or Series 4 ea. £25
TEACH YOURSELF CALCULUS £19
ZOOMBINIS - Logical Journey £23
DR SEUSS - Green Eggs & Ham £23
LOST MIND of DR BRAIN £21
TIME WARP of DR BRAIN £21
PROF. TIMS INCREDIBLE MACHINES £21
THINKIN' THINGS 3 £14
CALL GH FOR TITLES NOT LISTED

NEWTON

NEWTON 130 MkII - 2.5Mb, Backlit Screen £449
NEWTON 2000 - 8Mb, Backlit Screen £649
NEWTON GSM BUNDLE £949

NEWTON ACCESSORIES...

Keyboard £65
Print Pack £39
1Mb Storage Card £55
2Mb Storage Card £105
4Mb Storage Card £185
External FAX/Modem £84
AC Adaptor £19
Car Adaptor £23

FOR 110/120/130 Models...

Mains Recharger Cradle £49
Leather Carrycase £29
Nicad Battery Pack £15
Stylus £8

FOR 2000 Model...

2000 Carry Case (H0218Z/B) £29
2000+Keyboard Carry Case (H0228Z/A) £65
Wireless Comms Case (H0181Z/B) £40
AC Adaptor (H0214Z/A) £29
Battery Pack (H0212Z/A) £24
4Mb Flash Upgrade (H0230Z/A) £89

NEWTON SOFTWARE...

PowerForms £74
GoFigure £24
Berlitz 5 Language (PCMCIA) £70
Jig Saw Strategy Game £16
Equate £61
Press for Mac £52
Notion (The List Manager) £32
TapWorks £55
Accountable £48
Leverage 2.0 £88
Time Reporter £69
Quick Figure Pro £43
Now Synchronise £22

As a fully Authorised Apple Newton Centre...
GH have lots more for YOUR Newton - call us now and ask for the product YOU want!

AT GH WE MAKE EVERYTHING EASY...

PHONE GH...
We welcome all major credit/debit cards with NO TRANSACTION SURCHARGES.

ORDERING BY POST OR FAX...
Please include your Name, Address and preferably daytime and/or evening phone or fax number with your requirements. If using your debit/credit card include its number and valid from/expiry dates (also issue number with Switch cards). Please make cheques (allow 7 days clearance), Drafts or P.O.s payable to... **Gordon Harwood Computers Limited.**

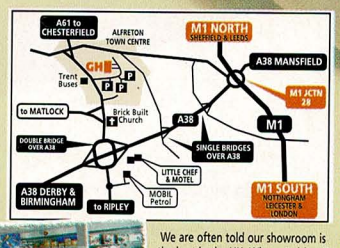
GH PRICES...
All UK and EC customers please add VAT at the standard rate of 17.5% to all prices. UK overseas Armed Forces Personnel may be exempt VAT - please ask for details.

DELIVERY...
We offer prompt shipment with fully insured express delivery options throughout the UK, Europe and Worldwide at a modest cost. If ordering by mail, please call to confirm the appropriate delivery charges.

GH WARRANTY...
Manufacturers' standard warranties apply or, ask about GH's comprehensive extended options which are always recommended for professional users to minimise costly down time - details available on request.

ALL PRICES EXCLUDE VAT
...and are shown for businesses only. Consumers please ask for VAT inclusive prices.

THE Showroom visit BEST in the UK



We are often told our showroom is the best in the UK. Why not visit us?

WE'RE AN EASY DRIVE FROM MOST AREAS

We're open Monday to Saturday 9.00am until 5.00pm...

This advertisement is an invitation to treat, not an offer to sell. Goods are not supplied on a trial basis. All transactions are subject to Harwood's Terms and Conditions of Sale, a copy of which is available on request. E.&O.E. Software/Product packaging, for bundled systems/items may not be included and is shown for illustration purposes only.

gordon harwood computers

01773 836781

PICK UP THE PHONE AND ORDER TODAY FOR DELIVERY TOMORROW

SHOWROOMS
OPEN SATURDAYS
EXPERT ADVICE
LARGE STOCKS
SAME DAY DESPATCH
FULL WARRANTIES
GOVERNMENT SUPPLIERS
SERVICE FACILITIES
NO CARD SURCHARGES

For your protection all Cards are fully Security Checked

OFFICIAL ORDERS...
We supply Central, Local Government and Education Departments along with Major PLCs

'FAST-FAX'...
on 01773 831040 for a Rapid Response to your Quotation or Order Requirements!

GH™
GORDON HARWOOD COMPUTERS

DEPT MAF/11 • NEW STREET
ALFRETON • DERBYSHIRE
DE55 7BP
Tel: 01773 836781
FAX: 01773 831040
e-mail: info@ghc.co.uk

New Apple software to work on every computer ■ Apple splits off Newton division ■ New PowerPC chips for autumn ■ News Editor: Richard Hill.

MACFORMAT NEWS

Apple's target: universal software

Apple is working on a project which could lead to every personal computer user in the world being able to use the same software, whether you're using a Mac or a PC.

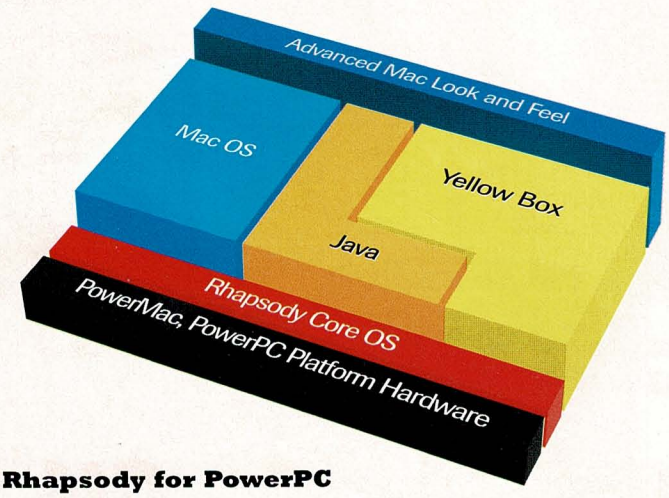
At present, you have to ensure that any software you buy will work on the operating system your computer uses (the Mac OS or Windows, for example); but Apple has revealed that its development of a new state-of-the-art OS (operating system) is simply part of an even more ambitious project to enable the production of software that will work on any modern computer. As a Mac owner, you could be enjoying the widest-ever choice of programs under the new plan.

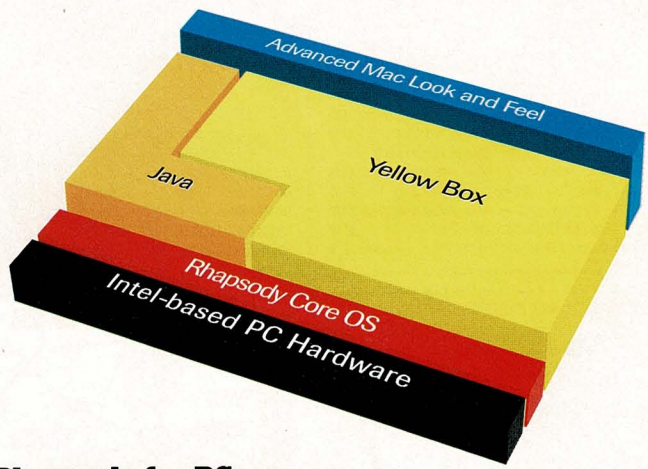
If enough software development firms adopt the new direction from Apple, you'll be able to buy software packages as single CD-ROMs containing closely-related versions of their programs able to work through any mainstream OS. Each CD-ROM can also easily store international versions of the software, opening the possibility of developers being able to offer their programs to every computer owner worldwide, at a far lower cost than was possible before.

How it will work

The core of the project is Yellow Box, the codename for Apple's

Why Yellow Box means four into one does go





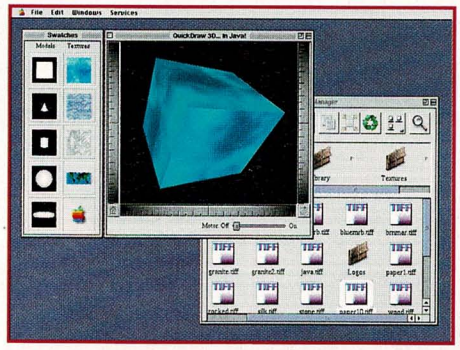
Rhapsody for PowerPC

Apple first announced Yellow Box as part of Rhapsody, its new OS for PowerMacs. Using Rhapsody for PowerPC will be like owning two computers – one running the traditional Mac OS (Blue Box) and one running the revamped OpenStep system (Yellow Box). Both will look very similar to Mac OS 8 in many respects, although they will work in entirely different ways. Both rely on a core system for basic functions.

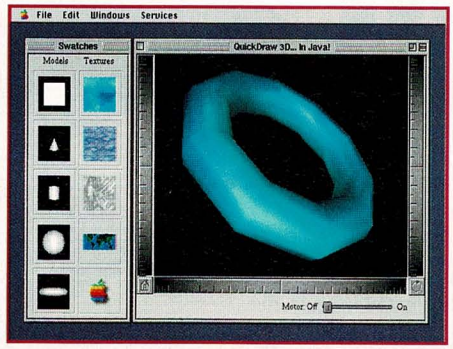
Rhapsody for PC

Rhapsody will also be available for the PC, bringing the famous Mac look and feel to PC-compatible computers for the first time. Rhapsody for PC will be a complete container for Yellow Box programs. All versions of Yellow Box will also work closely with Java, Sun's Internet component software system. Yellow Box will be able to act as an extension of Java, enabling the two systems to interact in new ways.

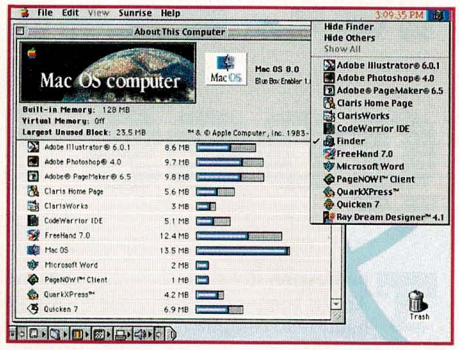
The first Rhapsody pictures



Although still far from complete, Rhapsody is already able to run software. Here, it's running a basic QuickDraw 3D application.



The interface is a raw, curious amalgam of Mac OS 8 and NeXT Software's OpenStep. The final Rhapsody look and feel is likely to be very different.



Blue Box (Rhapsody's Mac OS area) is also up and running. All the programs listed work fine without any modification.

revision of the OpenStep system planned as part of its new Rhapsody OS. Within Rhapsody, Yellow Box will operate in conjunction with another system called Mach, also developed by NeXT, with the two effectively functioning as layers (OpenStep on top of Mach) to handle tasks of differing complexity.

Apple announced at the recent Worldwide Developer Conference, which it hosted in San Jose, California, that it would extend this layering metaphor to enable Yellow Box to work on top of additional operating systems. The company plans to offer versions of Yellow Box which will work with Rhapsody, Windows 95 and its more sophisticated sibling Windows NT.

It also intends to modify the Mac OS so that it, too, can run Yellow Box programs. This is likely to happen in time for the release of Allegro, the codename for the new Mac OS set to appear in mid-1998.

Working with Yellow Box will enable programmers to create software that works across different operating systems much more quickly than before.

Using Yellow Box

The project is supposed to remove the burden of worrying about matching your needs with the right processor and the right operating system in order to use the programs you want. You'll be able to choose a computer based on its performance and the ease-of-use of its attendant OS areas – where Apple is confident the Mac has a clear advantage.

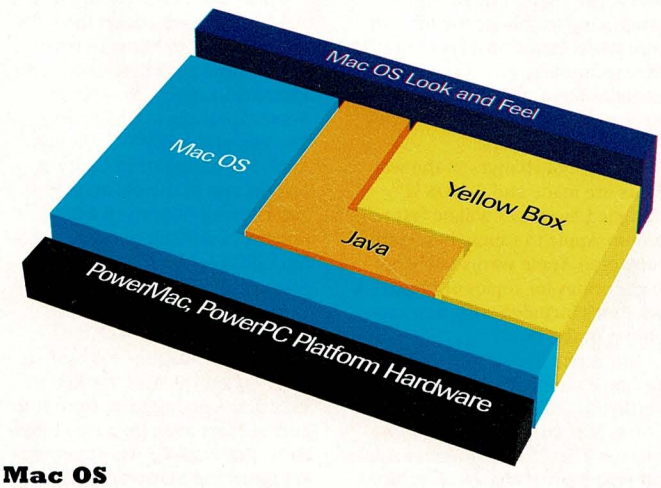
This divorcing of form and function will be possible because Yellow Box will sandwich itself between the top and bottom layers of any OS it works with. The host OS will be responsible for fundamental processes like transferring data, reading hard disks and networking, and will also dictate the look and feel of the interface. When you use Yellow Box software in the Mac OS, it will look like a Mac program; use it under Windows 95 and it will look and behave just like a Windows program.

The Yellow Box characteristics will further permit Apple to offer you a choice of flavours for its own operating systems. Along with the Mac OS, which will remain exclusive to PowerMacs, Apple will offer Rhapsody for PowerMacs and PC-compatibles. Both versions of Rhapsody will look much like the Mac OS (although Apple is still developing its appearance) and will run Yellow Box software. Rhapsody for the PowerMac will also be able to run Mac OS software, a feature that Rhapsody for the PC will not be able to emulate.

Apple will initially aim at different types of Mac owner, with Rhapsody appealing to the professional publisher, designer or engineer, for example, and the Mac OS remaining the staple of education and the home. In time, you may choose to move over to Rhapsody; buying Yellow Box programs will mean you'll preserve your software investment if and when you do so.

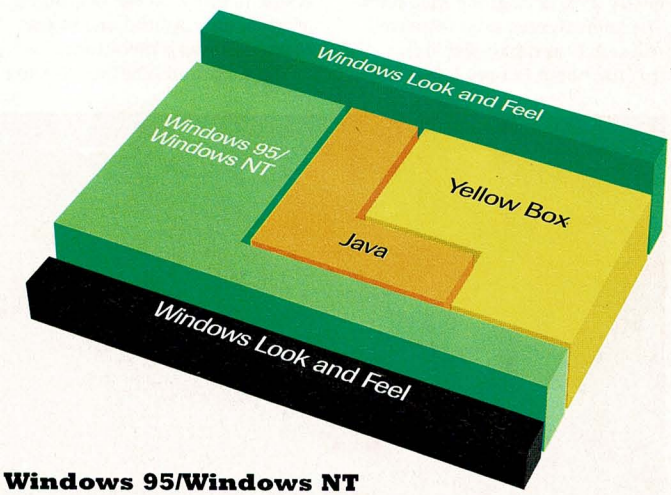
Using Blue Box

Developers attending the WWDC were also able to try out Rhapsody (or at least its current form) for the first time. Programmers tested their own existing Mac programs in Blue Box, the area of Rhapsody designed to run current Mac software. Of over 430 programs tested at the conference, only four failed to work smoothly on the spot, giving Blue Box a success rate of over 99% even before it's fully finished. Apple remains confident that Rhapsody can hit its deadline of a mid-1998 public release.



Mac OS

Perhaps the most dramatic Yellow Box news is that Apple now intends to integrate it into a later version of the Mac OS (probably 1998's major upgrade, codenamed Allegro). This means that you'll be able to use at least some programs written for Rhapsody, as long as you have powerful enough hardware. Yellow Box programs in the Mac OS will use the "classic" Mac look, newly remade for Mac OS 8.



Windows 95/Windows NT

The final Yellow Box implementation will be for Windows 95 and Windows NT, versions of Microsoft's operating system. OpenStep already works on PCs, so Apple's movement of Yellow Box into Windows is a logical decision to keep existing NeXT Software customers, who include some of the world's largest companies. Yellow Box software will be able to tap into Windows resources and look like a Windows program.

Newton goes solo

Above: the MessagePad 2000 looks like it will become the most successful Newton device so far.

Left: when the Newton division becomes a separate firm, it will be free to enhance its Newton OS – colour's a strong possibility.

The Newton division of Apple, responsible for hand-held computers like the MessagePad, is to become a separate company. Likely to be called Newton Inc, the new subsidiary will take over Apple's roles in developing Newton technology and selling machines.

The split follows months of speculation within the industry that Apple was trying to sell off its hand-held division as part of its attempts to make itself more efficient, countering its current financial problems, which include losing more than $800 million (around £495 million) in 1996.

Newton Inc will be free to manage its own finances and try its own marketing and distribution ideas, without having to worry about clashing with other Apple divisions like the portable PowerBook team. It may now produce colour MessagePads, for example.

After a long initial struggle, the Newton operating system has come into its own as a powerful, flexible aide to performing computing tasks on the road. (We gave the latest MessagePad 2000 an 89% rating in MACFORMAT 48.) Despite losing money for years, the division is now looking stronger, predicting up to 75,000 sales this year.

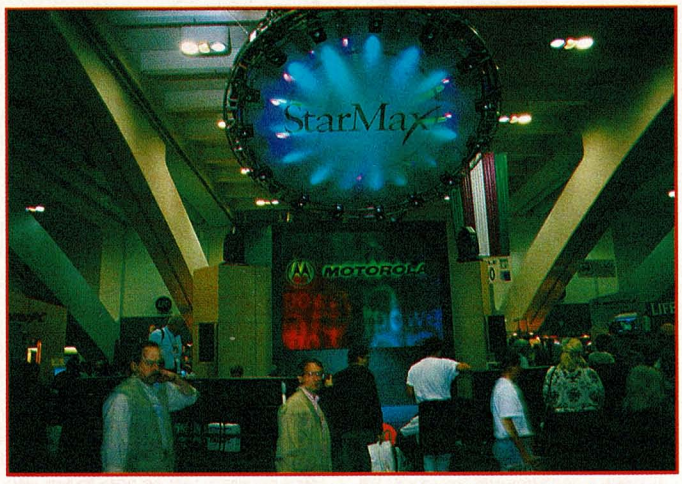
Apple will continue a close relationship with the new company, especially in education, where Apple will keep control of the well-received Newton-based eMate computer, aimed at students and due to go on sale in the UK within the next 12 months.

Apple's only other subsidiary is Claris, which has proved enormously successful at offering high-quality software for the Mac. The firm has also recently reported record profits.

Tension as Mac clones take off

Sales of Mac-compatible computers from firms other than Apple now account for nearly 25% of ongoing Mac sales. The latest figures from respected research firm Dataquest indicate that the boom in non-Apple Mac sales is giving customers better choice and lower prices, and that this is helping the Mac market as a whole to grow. At the beginning of 1996, only around one in ten Macs sold was a Mac-clone.

The success of Mac licensees like Power Computing and Motorola may be contributing towards current tension between these firms and Apple itself, though. Apple is attempting to change the fee structure it sets for companies to use Mac technology and software, but negotiations are stalling, according to representatives of several firms involved in the talks.



The high profile of Mac licensees like Motorola is having a profound effect on the Mac, with Apple's own ongoing share of the Mac market down to 75%.

Because of changes in the way Macs are made and the OS is designed, licensees will be less reliant on Apple to supply hardware in future; so Apple wants to charge higher rates for copies of Mac OS 8 when it's included with new machines in the future.

But many licensees are objecting to Apple's apparent insistence on certifying their machines to confirm 100% Mac compatibility before release. They claim this gives Apple an unfair advantage in launching new technologies, when the aim should be a level playing field for every company's benefit. Some firms suggest an independent body to certify machine designs, while others say that each firm should be free to innovate, with customers deciding the degree of compatibility that's important to them.

Unlike the licensees, Apple is making no comment on the talks, so it's difficult to know to what extent these public complaints are attempts to apply leverage on Apple. Speaking to trade paper *MacWeek* at the WWDC, though, Apple's licensing head Garey de Angelis said of the old arrangement: "In all honesty, we made it somewhat difficult to get products through. We had this barrier of resource limitations, and the only way we could really constrain things was through certification."

If Apple maintains too tight a control over the Mac market, it risks discouraging firms from producing Macs at all because of high costs. But would a wide open market mean the Mac would ultimately lose the ease of use and high degree of compatibility which have proved its biggest assets? The Mac licensees still expect to resolve the best way to go forward by the time Mac OS 8 is released in late July. ➤

From only... £249!

If you could fit MACCELERATE! to a 100 metre sprinter...

Mac User Classic Award April '97

You know what it's like...

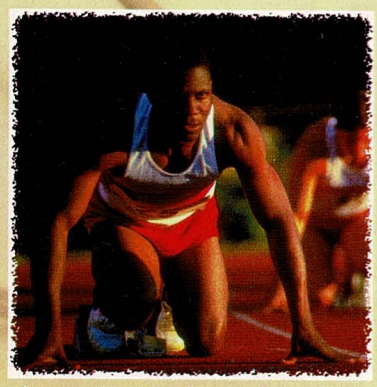
When you're starting your Mac, loading a program or file, waiting for that Photoshop™ effect, or in fact doing pretty much anything... your computer doesn't feel as fast as it used to, does it? Its not become tired itself, but the demands of the latest OS versions and the newest applications keep getting higher and higher and slow your system down. And, if you've tried one, you'll know that today's Macs are a lot faster.

So, should you buy a new Mac now?

What is MACcelerate™?

Unlike many 'go-faster' upgrades which overspeed the standard processor, Maccelerate™ is a complete replacement for your Mac's original processor and daughterboard - it uses the new fast 604e CPU with 2 integral 32k caches. So, because the 604e is much more powerful than a 601 or 603, and by combining the extra horsepower it offers with the higher clock speeds of 150, 180 or 200MHz. You can see from the charts that...

The performance gains are massive.



The current Olympic Record is held by Donovan Bailey who was timed at 9.84 seconds during the 1996 Olympic Games in Atlanta

The New Olympic Record would be just 2.62 secsonds.

Can I fit MACcelerate™ myself?

If you've never fitted an internal upgrade yourself, don't worry...

Your Mac was designed by Apple to be processor upgradeable and Maccelerate™ couldn't be simpler to fit. No soldering, no cables, no software to load (it simply requires System 7.5.3 or later), just plug Maccelerate™ in and reboot!

Simply fit to your Apple Macintosh 7300, 7500, 7600, 8500, 8550, 8600, 9500, 9600 or many compatible Macintosh OS clones and re-boot!

Or, if you prefer, Harwoods can fit yours for you.

MACcelerate™ Quality...

Designed and built by Europe's largest manufacturer of Motorola Processor cards, you can be assured of its quality and reliability. Get the best from your Mac, accelerate it now with MACcelerate.

Not all Processor Boards are Created Equal...

The MACcelerate™ range has two important features, not found on similar products, which are essential to maintain the highest standards of system reliability.

- **PROCESSOR DECOUPLING CIRCUITRY (PDC)**
Whilst the PowerPC 604e was designed to operate at 3.3 volts, Power Macintosh main circuit boards operate at 5 volts. Although the processor's I/O buffers can be run at 5 volts, this may decrease the processor's lifespan. Perhaps not such a serious problem for infrequent users, but crucial if the system is to be used regularly or even constantly (eg. servers etc.). MACcelerate™ operates its processor at the correct voltage - as specified by Motorola.

- **PHASE LOCKED LOOP CLOCK SYNTHESISER (PLLCS)**
We all know how a Macintosh may occasionally freeze for no apparent reason. Well, that's why MACcelerate™ incorporates a Phase Locked Loop Clock Synthesiser which ensures that system synchronisation on start-up is set to a more reliable fixed frequency between the main circuit board's upper and lower tolerances.

The result is a far higher standard of operational reliability than found when using boards that don't incorporate PLLCS circuitry.

Buy with Absolute Confidence...

Because we're so sure you'll be happy with MACcelerate™ you can now take up our offer to...

- **TRY BEFORE YOU BUY**
If you want to see just how fast your Mac can operate with Maccelerate, call in and our Apple Authorised Service engineers will install one, with no obligation to buy, so you can feel the speed for yourself. Just phone us in advance to make your appointment.

- **MONEY BACK GUARANTEE**
We're so confident you'll be pleased with Maccelerate that it comes with a money back guarantee* so that you can try one out safe in the knowledge that you can return it to us if you're not completely satisfied.

- **PLUG-AND-GO**
Maccelerate does not invalidate your Mac's warranty and full product support is included.

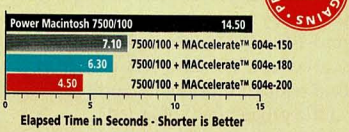
For a Motorola™ 604e PowerPC™ performance increase for YOUR system and ALL its applications... just 'Plug-and-Go'.

MACcelerate™ Specification, Performance and Prices

Photoshop 3.05 Gaussian Blur

Test Picture: 1181 x 1671 pixels - 24bit

PERFORMANCE GAINS 204% to 322%

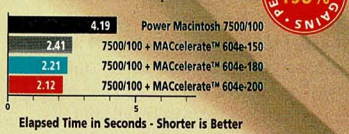


Elapsed Time in Seconds - Shorter is Better

KPT Bryce 2.0 Rendering

Test Picture: 480 x 360 pixels

PERFORMANCE GAINS 174% to 198%

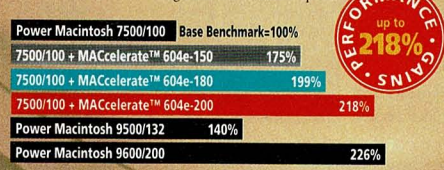


Elapsed Time in Seconds - Shorter is Better

MacBench 3.0 Processor Performance Test

Test: Combined Floating Point and Processor Speeds

PERFORMANCE GAINS up to 218%

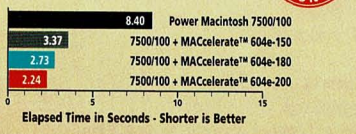

Power Macintosh 7500/100 Base Benchmark=100%
7500/100 + MACcelerate™ 604e-150 175%
7500/100 + MACcelerate™ 604e-180 199%
7500/100 + MACcelerate™ 604e-200 218%
Power Macintosh 9500/132 140%
Power Macintosh 9600/200 226%

Why consider replacing your 7500? Add MACcelerate for a moderate cost and almost equal the performance of the latest 9600/200! **Overall performance increases measured using the industry standard MacBench 3.0 application. Results are combined for the integral floating point maths co-processor and main processor. Longer is Better.**

Photoshop 3.05 RGB to CMYK

Test Picture: 1181 x 1671 pixels - 24bit

PERFORMANCE GAINS 249% to 375%



Elapsed Time in Seconds - Shorter is Better

Earning a MacFormat Magazine Classic Award, MACcelerate recently scored 91% in their review article. MacFormat said "...the MACcelerate is your ticket to first-class performance. Excellent".

MACcelerate has just received a four and a half mice rating in Mac User which said "If you need speed, you have one of the processor upgradable Macs, and you have a few hundred pounds to spend, then you could certainly do worse than buy a MACcelerate card!"

Point your web browser at Motorola's own web site... http://www.mot.com/SPS/PowerPC/products/semiconductor/chips.html to see why the 604e is the most powerful processor available for YOUR Macintosh desktop system.

150MHz MACcelerate™ £249 + VAT
New 604e with 2 x 32K Internal Cache

180MHz MACcelerate™ £349 + VAT
New 604e with 2 x 32K Internal Cache

200MHz MACcelerate™ £499 + VAT
New 604e with 2 x 32K Internal Cache

MACcelerate™ is distributed by ***Gordon Harwood Computers.*** Dealers please call for prices.

All prices exclude VAT and are shown for business purchasers only. Consumers, please ask for VAT inclusive prices. All Trademarks are acknowledged. Prices correct at time of going to press, E&OE.
**Maccelerate money back guarantee is for 14 days after purchasing direct from Harwoods and excludes carriage, repayment based on RRP on date of return.*

gordon harwood computers

01773 836781

PICK UP THE PHONE AND ORDER TODAY FOR DELIVERY TOMORROW

VISIT OUR SHOWROOM AND SEE THE SPEED FOR YOURSELF!

WE'RE EASY TO FIND, SO WHY NOT PAY US A VISIT. Please check availability before making a long journey.

We accept most major Credit and Debit Cards and there are NO SURCHARGES!

For your protection all Cards are fully Security Checked

ORDER...
By phone or fax using your credit/debit card or by post enclosing cheque/draft payment to "Gordon Harwood Computers Limited".

OFFICIAL ORDERS...
We supply Central, Local Government and Education Departments along with Major PLCs

DELIVERY...
Please add £7 for Standard 2-3 working days delivery or £10 for a FAST next working day service.

GHC
GORDON HARWOOD COMPUTERS
DEPT MAF/2 • NEW STREET
ALFRETON • DERBYSHIRE
DE55 7BP
Tel: 01773 836781
FAX: 01773 831040
e-mail: info@ghc.co.uk

Autumn debut for new PowerPC chips

The PowerMac 9600 is set for an autumn revamp, taking it to even higher levels of performance.

The next set of PowerMacs from Apple may see the appearance of brand-new processors, starting off a new wave of improvements to Mac performance. Appearing this autumn, the new machines may include a revamped version of the PowerPC 604e chip, the fastest found in any personal computer.

Codenamed Mach 5, the new 604e chips come from Motorola as usual, and will also appear in Mac-compatible computers from other firms such as Power Computing and Umax. The first Mach 5 chips may run at speeds up to 350MHz, compared to the 250MHz chips just becoming available in small quantities. Mach 5 chips will also include a new design for the Level 2 RAM cache, used to store frequently-used processor data to speed up operations. The new cache design will remove bottlenecks that had been slowing down PowerMacs by more than was necessary.

Mach 5 on show

The public got to see Mach 5 in action for the first time at the recent Macworld Expo in Taipei, Taiwan. Yet to release an official Mac-compatible computer, well-known electronics company Tatung demonstrated a 300MHz Mach 5 prototype running inside its CHRP (Common Hardware Reference Platform) computer. Several firms are waiting for Apple to complete work on Mac OS 8, the newest version of the OS, before releasing new Macs based on the new low-cost CHRP designs. We'll have news of all the developments in future issues of MACFORMAT.

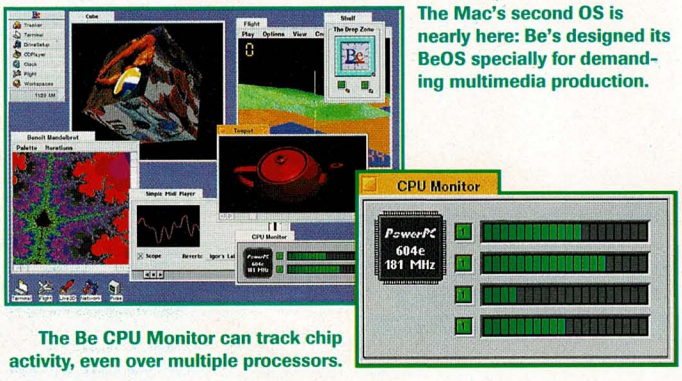
BeOS nears completion

The second OS (operating system) for the Mac is almost ready. An early version of the BeOS, a new and advanced OS for PowerMacs, is due for public release within weeks. Already in the hands of developers, the BeOS Preview Release will highlight the Be company's ambition to offer you the most advanced multimedia system available. Be anticipates that around 80 programs will be available for the BeOS by the autumn, although so far, few developers have announced any plans publicly.

The Preview Release of the BeOS will give the most accurate impression so far of what the new OS will be capable of when it's released. The BeOS is designed to enable the fastest possible production and use of digital media, including video, audio and 2D and 3D graphics. Be's contention is that today's operating systems (including the Mac OS) make inefficient use of modern high-speed processors, because their foundations were designed for other purposes than digital media like video.

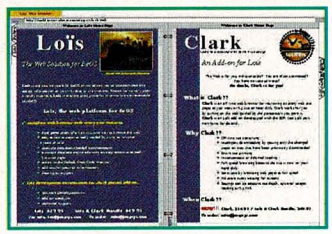
Be reckons that every part of its OS is tailored for using digital media. Because video and sound files can be huge, for example, the BeOS will be able to recognise individual files bigger than 4Gb (the present limit on the Mac OS) and use storage systems of up to 256 terabytes (equivalent to over 1,000Gb). The BeOS can manipulate graphics and video at truly astonishingly high speeds, squeezing even more mileage from your PowerPC processor.

The BeOS is designed to integrate seamlessly into your existing PowerMac set-up: it can now send to Mac-compatible printers, operate over AppleTalk networks (see our cover feature for AppleTalk details) and use Mac-compatible hard drives. It can also use multiple-processor Mac systems to speed up any BeOS program.



The Mac's second OS is nearly here: Be's designed its BeOS specially for demanding multimedia production.

The Be CPU Monitor can track chip activity, even over multiple processors.



The BeOS promises to attract new developers and new ideas to the Mac: *Lois and Clark* is a Web browsing suite with a book-like feel.

■ Be developer fredlabs has had to cease its work on *VirtualMac*, a program which promised to offer you the ability to run Mac software under the BeOS (see News, MACFORMAT 48). The firm was unable to find enough funding to continue, so the project has collapsed. ➤

To Be or (ahem) not to Be?

Many, but not all, PowerMacs will able to run the BeOS Preview Release as soon as it appears; the main exceptions are PowerMacs based on 601 and 603 processors, largely because most of these Macs do not have PCI expansion slots. Be will not be producing a BeOS for 68K Macs like the Quadra, Performa 630 or older models.

Confirmed as BeOS-compatible

■ **Apple:**
Performa 6400, PowerMac 7300 and 7600, PowerMac 8500 and 8600, PowerMac 9500 and 9600, all MP models.

Although Be is still to report its test results, current home PowerMacs like the PowerMac 5500 and 6500 should be able to run the BeOS without any problems.

■ **DayStar:**
All Genesis MP models.

■ **Motorola:**
All StarMax models.

■ **Power Computing:**
PowerBase, PowerCenter, PowerCenter Pro, PowerTower, PowerTower Pro, all MP models.

■ **Umax:**
Apus 240, all Pulsar models.

TILLBROOK

Global Suppliers to the Computer World

AMAZINGLY LOW PRICES!

FREE DELIVERY
For all Hardware orders over £100

Hard Drives

SCSI

	Internal	External
700Mb	£82	£126
1.2Gig	£149	£169
2Gig	£185	£220
4Gig	£399	£439
9Gig	£799	£899
4.5Gig U SCSI 3	£529	--------
2.1Gig FW IBM	£239	--------

Cables and Software incl in price

Storage Drives

230Mb	Optical Drive	£245
640Mb	Optical Drive	£329
2.6Gig	Optical Drive	£895
88Mb	SyQuest Drive	£145
200Mb	SyQuest Drive	£295
Omega	Zip Drive	£99
1Gig	Jaz Drive	£295
16x Cd-Drive		£179

Cables and Software incl in price

Ricoh 2x6 Cd-Rewritable	£589
Yamaha 4x6 Cd-Writer	£449
Yamaha 2x4 Cd-Writer	£249
Yamaha 4x6 Cd-Writer (Incl 2Gig Hard Drive)	£699

Including Toast and Cables

FREE 10xCd's

Dat Drive 4-16Gig	£579
Retrospect Remote	£89

Cables +120m Tape included in price

Media

	90M	120M
Dat Tapes	£4.95	£14.25
CD-R Disks	£3.95	

Optical Disks

128Mb	£5.69
230Mb	£6.99
640Mb	£24.75
600/650Mb	£22.75
1.2/1.3Gig	£26.95
2.6Gig	£38.95

Genuine SyQuest Carts

44Mb	£24.95
88Mb	£27.95
200Mb	£39.95
Zip Disks	£9.65
Jaz Disks	£62.95

Memory

	Simm	Dimm
8Mb	£27.95	£35
16Mb	£58.95	£57.95
32Mb	£119	£110
64Mb	£Call	£Call

Lifetime Warrantee on ALL Memory

For More Information on ALL our Products and Services Call

24hr Hot Line: 0118 931 0531

Fax: 0118 975 1024

24Hr Same Day Delivery

Trade Enquiries 0118 931 4399

TILLBROOK LTD, First Base, Beacontree Plaza, Gillette Way, Reading RG2 0BP

All prices exclude VAT, delivery and are subject to change without notice. All sales are subject to Tillbrook Limited standard terms and conditions - A full copy is available on request. E&OE

PowerPC chips to get VMX multimedia

The companies behind the PowerPC chip used in PowerMacs plan to add extra features to forthcoming new chip designs, boosting the chips' ability to display graphics and multimedia. The new features will come from a system called VMX (Video and Multimedia eXtensions), which you should find appearing in new processors by the end of 1998.

The name VMX is an obvious riposte to MMX, the multimedia acceleration system recently unveiled by chip-maker Intel for its PC-compatible processors. In order to take advantage of MMX, PC owners have to buy new software (of which little exists at present) as well as a new computer. While VMX will obviously only be able to feature on new machines, it's likely that speeding up your programs through the system should be much easier than having to replace your entire software collection.

VMX will work through the QuickTime Media Layer, the selection of multimedia and graphics systems based on Apple's own QuickTime. In theory, you could speed up any program that uses a QuickTime technology, simply by adding a VMX-compatible version of the QuickTime software. This would enable VMX to improve the performance of video and audio, 2D graphics and 3D graphics through the QuickDraw 3D system.

If VMX fulfils its promise and proves a more effective and wide-ranging acceleration system than MMX, it will give Apple and its partners excellent ammunition to counter Intel.

At the same time, Apple is also working with electronics giant Philips on some more conventional plug-in high-speed multimedia cards for its PowerMac range.

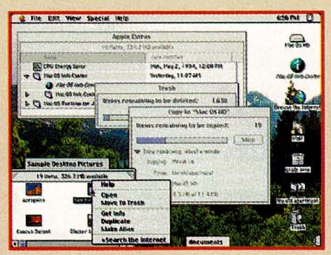
High-speed Mac systems, like those from (clockwise starting top right) Umax, Motorola and Power, could receive an extra boost if VMX multimedia acceleration software arrives next year.

News in brief

Mac OS set to last right into the next century

Apple has confirmed that it will continue to support and evolve the Mac OS for years to come, despite its work on its new OS Rhapsody. Speaking at the recent Worldwide Developers Conference (WWDC), Apple's head software engineer Avadis Tevanian said that Apple would not "just replace the Mac OS with Rhapsody." He added that he sees at least five years of active life in the Mac OS.

A comment from fellow engineer Steven Glass, though, revealed how badly work on the Mac OS had slipped around two years ago, when Apple envisaged its Copland OS as the successor to the Mac OS. (Apple has since abandoned work on Copland in favour of Rhapsody.) Glass said that Apple had just six people working on and correcting the Mac OS at that point, compared to over 100 working on the system now. Apple plans to have yearly revisions of the Mac OS, and these are scheduled into the year 2000.



July's Mac OS 8 is still only the nearest in a series of radical enhancements for the next century.

Super-chip maker shuts down

Exponential, the firm behind the promising X704 variation on the PowerPC chip, is closing its doors. The X704 was the first of a projected series of new processors with the potential to double the PowerPC processor's speed. Exponential planned chips capable of running at 533MHz, compared to the current available top speed of 250MHz. But Apple decided not to use the X704 in Macs this year, after Exponential failed to hit its deadlines, while new PowerPC processors from IBM and Motorola (see "Autumn debut" story on page 22) performed better than expected.

Pippin lives as Bandai rethinks its plans

The Pippin Internet and multimedia console has survived recent upheavals at Bandai, the larger of the two firms involved with the project. The firm has abandoned plans to merge with games giant Sega after resistance from its own employees, but this may lead to a stronger profile for Pippin in the long run. (Sega's own technology plans revolve around different systems.)

Bandai has now followed European Pippin partner Katz Media by moving away from the home market in favour of designing Pippin consoles for professional uses, such as banking and shopping through the Internet. It will soon be adding high-speed Ethernet networking, for example.

More lives than a cat: the Pippin console survives, but can it become a success?

Access the Internet with Direct Connection and you'll never feel left out in the cold. Call us and you'll be greeted by a helpful team who understand your concerns. Join us and you'll be welcomed as a fellow member – not treated like the number on an invoice. We've been connecting people since 1989, we've solved problems that most net providers have only just discovered, and we've learnt hundreds of ways to be more useful and more accommodating. So call Direct Connection today, and cross the threshold to a friendlier Internet.

Check out the details for yourself:

- ★ Free Mac Software (fully licensed)
- ★ 100% UK-Wide local call access
- ★ Joining fee of just £7.49 ex VAT, £8.80 inc VAT
- ★ Dial-up account just £11.49 ex VAT a month, £13.50 inc VAT
- ★ Mac-friendly 7 day-a-week support
- ★ Access via modem (up to 33.6Kbps) or ISDN
- ★ Free 5Mb of Web space
- ★ Corporate services available (web hosting, email gateways, etc)

Telephone 0800 072 0000 for further details, 0181 852 8800 for faxback information, or email us on sales@dircon.net

Direct Connection

http://www.dircon.net

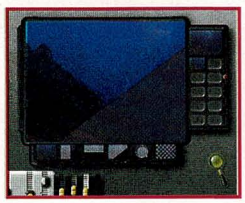
Direct Connection, Martin House, 1 Tranquil Vale, Blackheath Village, London SE3 0BU

Transform your photos with Kai's Photo Soap ■ Duke Nukem explodes onto the Mac ■ The new Netscape ■ An enjoyable joystick ■ Compiled by Jane Bentley.

Kai's Photo Soap

Image manipulation software need no longer be a designer label item. MetaCreations, previously known as MetaTools, has a brand new affordable package called *Kai's Photo Soap*.

If it sounds rather like a familiar Adobe product, perhaps that's intentional; like *Photoshop*, *Soap* can transform your images. The difference is that *Soap* requires little technical knowledge; it's quick and simple to use and can transform the most degraded photo images into rich, clear and nearly perfect pictures. *Kai's Photo Soap* removes complicated editing processes and uses an array of recognisable tools to retouch any image you like.



Use tools from the bottom drawer for a before-and-after check on tone and colour adjustments.

In keeping with MetaCreations' unconventional style, *Soap* ignores the traditional Mac menu bar. Instead, it presents an arc of editing areas called rooms, any of which you can simply enter at will until you leave the Finishing Room with your newly reworked image. After you've selected your image from a connected scanner, digital camera or personalised photo albums, it appears in the centre of a worktop interface on your chosen room ready for alteration.

Each room has a selection of tools for carrying out a specific enhancing effect such as cropping or brightness – there's even a red-eye removal tool to correct all those photos where your friends and family look like the living dead!

A map icon at the top of the screen enables you to move between rooms instantly. Around the sides the worktops are pull-out drawers containing familiar tools such as brushes, erasers and pencils. Move the tools around as you would in any normal working environment: you can scatter them all over the place or tidy them away in some kind of order, if you prefer. Slide the tool over the area you want to enhance, and if you've got a reasonably fast processor, the change occurs in seconds.

Left: *Kai's Photo Soap* takes a new approach that anyone can understand to working with images.

Below: *Soap's* rooms enable you to enhance even the most degraded photo images.

In the Finishing Room you'll find options for adding backgrounds, text and colour and even customising the edges of your image. These are all useful effects for producing calendars and cards with your chosen image.

After applying all the effects to an image, you can choose to save the finished item in a variety of sizes and formats. You can save your work as a JPEG image if you want to put it on a Web page, as a standard TIFF file or even in FlashPix format, an advanced image file that produces your images at different resolutions depending on how you're using it at the time (low resolution for the screen, high resolution for your printer).

MetaCreations has created *Photo Soap's* appealing, stylish interface with a view to building more features into it in the near future. The MetaWorld concept opens up the prospect of software like *Kai's Power Goo* blending with *Soap* to create a larger numbers of rooms within a single environment.

Left: *Soap's* drawing and brush tools enable you to apply colour and tone as easily as painting.

Right: Detail tools enable you to remove blemishes and scratches from the original photo.

■ **Price:** £39.99 ■ **Out:** now
■ **Requires:** PowerMac with System 7.5 and 8Mb RAM, CD drive and 16-bit video
■ **Contact:** Principal Distribution on 01756 704000

Duke Nukem 3D Atomic Edition

Forget *Marathon* and *Doom;* the Duke's in town and he ain't takin' any prisoners. He chews gum, kicks ass, has a host of one-liners and he's popular with the ladies. An altogether new kind of hero, Duke Nukem is larger than life and is marching his way onto the Mac with *Duke Nukem 3D: Atomic Edition.*

From its humble beginnings as a piece of shareware designed by 3D Realms to its most recent Plutonium Pak version on the PC, *Duke Nukem's* been a great success. Now development team Lion Entertainment has brought this shoot-'em-up to the Mac.

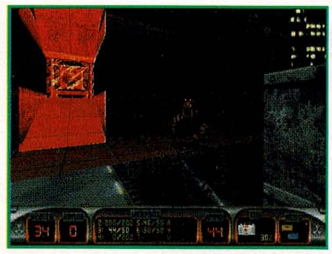
The *Atomic Edition* includes 11 levels of gaming (out of a total of 39) that are only available in this Mac version, and there are new enemies, which you can face in four different skill levels.

The Mac's latest 3D shoot-'em-up feast is *Duke Nukem 3D*, a fast and furious blaster across 39 levels.

The gameplay is similar to that in *Doom*, but *Duke Nukem* has an earthy sense of humour. Throughout his mission to rid the earth of an alien race, the Duke's language is lewd, he's often surrounded by strippers, pumped up on steroids and ultra-violent to the hilt. The adult setting makes *Duke Nukem* compelling gaming: after all, it's not every day you're the Terminator and Dirty Harry rolled into one. Concerned parents can tame Duke's antics by turning off the adult mode or even deploying password protection.

Duke's deadliest weapon is a microwave cannon, so you can be sure that he's really nuked the bad guys, but there's also a shrink ray, double-barrelled stinger, missile launcher, and laser, with a freeze thrower for backup. Of course, he can always punch their lights out if they get too close.

Apart from Duke's enemies, every backdrop prop responds to gunfire. Bottles smash and spray liquid everywhere, toilets shatter, windows and TV monitors explode, but you take a big risk shooting a stripper! One useful feature is the security panel you can use to control the security cameras fixed in every building. This is a tactical ploy to help you track down your alien targets. The underwater scenes are perhaps the biggest challenge as you have to swim, shoot your enemies and remember to come up for air at the same time.



Advanced game design plunges you into a creature-infested city.

Watch for our thoroughgoing review in MACFORMAT next issue!

■ **Price:** around £25 ■ **Out:** now ■ **Requires:** 68040 processor or PowerMac, System 7.1, 16Mb RAM, CD-ROM drive ■ **Contact:** GT Interactive on 0171 258 3791

Many of Duke's opponents are ferocious animals that walk like humans. Get them before they get you!

***Duke Nukem's* variety of weapons and puzzles keep the game mechanics fresh throughout a mammoth storyline.**

***Duke Nukem* contains elements some may find distasteful, but you can remove these from the storyline if you wish.**

Microsoft SideWinder Pro

Your enjoyment of some genres of game on the Mac, especially flight sims, has been largely restricted by having to master complex sets of keyboard controls that require finer hand-eye coordination than flying a real helicopter. Or so it seems. Following a growing trend for enhanced gameplay, Microsoft has developed the SideWinder Pro joystick to give you total gaming control and put the... er, *joy* back into joysticks.

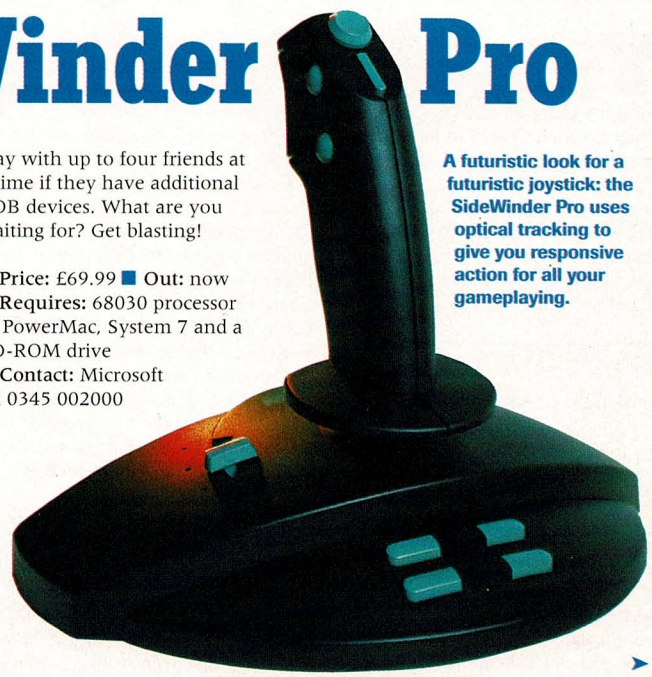
The SideWinder Pro is different in that it uses digital optical technology rather than relying on components found in traditional analogue joysticks. As you move the joystick around, an optical camera tracks its movements. This makes the joystick more responsive, and that in turn means your gaming should be more enjoyable.

The SideWinder Pro boasts a host of features for the ultimate gaming experience. Its handle rotation feature enables you to set up rudder control for flight sims or the ability to strafe in shoot-'em-ups. A speed control mounted on the base enables you to accelerate or decelerate at will.

The joystick handle has four buttons at your fingertips to control fire and select weapons, while four additional buttons on the base of the 'stick enable you to configure other game features.

The SideWinder's **Game Device Editor** gives you the option to customise movements for each game and includes sample set-ups for popular Mac titles. You can also play with up to four friends at a time if they have additional ADB devices. What are you waiting for? Get blasting!

■ **Price:** £69.99 ■ **Out:** now ■ **Requires:** 68030 processor or PowerMac, System 7 and a CD-ROM drive ■ **Contact:** Microsoft on 0345 002000



A futuristic look for a futuristic joystick: the SideWinder Pro uses optical tracking to give you responsive action for all your gameplaying.

Netscape Communicator

Netscape is continually setting the standards for Net browsers. The essential components of a good browser enable you to display Web pages, follow links and store favourite locations for reference. With the rise of Intranet management and networking (see our cover feature, starting on page 34), Netscape is now introducing *Netscape Communicator*, a complete communications program for your business.

The modern office, according to Netscape, is paperless, a digitally managed system of instant communication. With the Web, e-mail and video conferencing, you can store and distribute all your documents, schedules and messages without leaving your desk. Netscape has addressed these areas with *Communicator*, and the result is a collection of tools that enable you to access and share information on the Internet or via your local network.

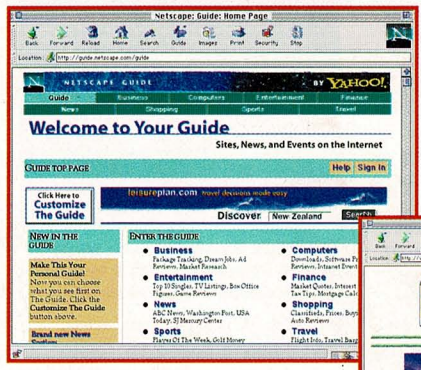
You can use *Netscape* tools like *Composer* to create documents and publish them across any network.

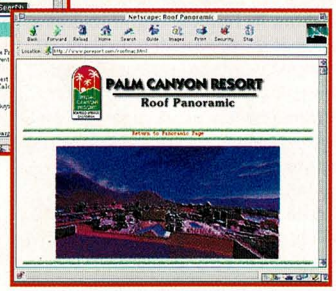
Art of communication

Communicator includes the newly-updated *Netscape Navigator 4.0* browser, and provides you with an array of communication options that are designed to give you more creative possibilities. Netscape has focused on extra searching facilities for *Navigator*, with built-in links to Web pages where you'll find directories for Web and e-mail addresses. You can share this information with other *Communicator* programs to build up on-line address books.

Composer is Netscape's publishing and editing software, enabling you to create your own Web pages. It includes page templates for creating documents or tables and text formatting tools for fonts, styles and paragraph alignment.

Messenger and *Collabra* both use *Composer* as their editor for creating mail documents. *Messenger* is an e-mail package that can filter and file incoming messages, has a facility for exchanging digital business cards, and uses digital message signing to identify sent mail and detect tampering. *Collabra* enables you to create on-line discussion areas with colleagues or publish key information company-wide. *Netscape Conference* moves beyond *Collabra* to offer live audio chat and information sharing facilities.





The redesigned *Navigator* is the flagship of a new suite to help you use the Net and local networks to share information more easily. Expanded search and multimedia facilities may make *Communicator* the most advanced Net suite ever.

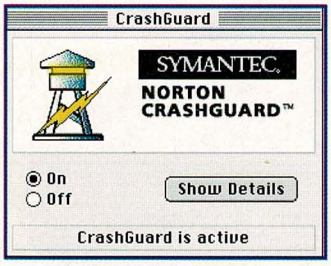
Two editions of *Communicator* are available, with the Professional edition adding three extra tools to the Standard package: *Calendar* enables you to set up and share appointments across your network; *AutoAdmin* tracks your firm's *Communicator* distribution and offers automatic software updates; and *IBM Host-on-Demand* provides a Telnet 3270 link to your company's main database servers for advanced information distribution.

■ **Price:** TBA ■ **Out:** July ■ **Requires:** 68020 processor or PowerMac, System 7.1 or later, 16Mb RAM ■ **Contact:** Netscape on 0181 564 5100

Norton Utilities 3.5

Your Mac is a mighty machine, but like every exercised muscle, it's liable to injury sometimes. Symantec created *Norton Utilities* to help you keep your Mac in tip-top shape.

Norton Utilities includes a valuable core of software that recognises problems on your Mac and then repairs your hard drive, recovers deleted files, restores crashed disks, makes back-ups and copies files.



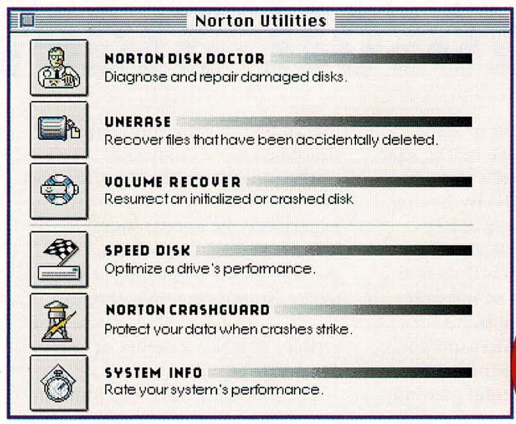
The brand-new *CrashGuard* should prevent your Mac freezing up just when you can least afford it.

Norton Utilities 3.5 is the updated version, with several new utilities to forestall disk errors and protect your data.

The most crucial new element of *Norton 3.5* is *CrashGuard*, a utility designed to stop your Mac from freezing if it should crash. Removing the need for a complete restart enables you to save data that would otherwise have been lost. *CrashGuard* also identifies the cause of a crash, increasing your chances of avoiding a repeat incident.

Prevention is better than cure, so *Norton 3.5* also includes *FileSaver*, which works in the background, scanning your disks for potential faults and alerting you to problems that need your attention.

An improved *Speed Disk* joins together areas of large files that might be scattered across your hard drive, enabling your Mac to run faster, while *Disk Doctor* and *Disk Editor* scan, analyse and repair hard disk drives and floppy disks. *Volume Recover* is a data recovery tool, and *UnErase* resurrects files that you've accidentally deleted or lost.



Thousands of people rely on the *Norton Utilities* suite to preserve vital data stored on their Macs. Now *Norton 3.5* improves on a successful formula with new ideas and enhanced favourites.

More product news on page 130

You'll also find step-by-step instructions on how to use each *Norton* program with the new Apple Guide Support, offering you a useful on-line manual you can readily access when faced with disasters like crashing and file corruption.

■ **Price:** £99 ■ **Out:** now ■ **Requires:** 68020 processor or PowerMac, System 7.1, 4Mb RAM and CD-ROM drive ■ **Contact:** Symantec on 0171 616 5600

Sony monitors now come with a wider choice of peripherals.

Multiscan® sx range
Entry level 15" and 17" CRT displays.

Multiscan sf range
Mid range Sony 15", 17" and 20" CRT displays.

Multiscan se range
Top of the range 17" and 20" CRT displays.

As well as original Apple Macintosh systems, you can now choose from a wide range of 'Mac' clones to add to your Sony Trinitron® monitor. Whichever 'Mac' you opt for, adding a Sony monitor not only gives you the best screen performance, but also the assurance of compatibility with future systems... whichever way they may go. So to enjoy today's technology without needing to worry about tomorrow's, contact Sony...

Sony Information Technology Group
A division of Sony United Kingdom Limited.
Sony, Trinitron and Multiscan are registered trademarks of the Sony Corporation, Japan.
All other trademarks are acknowledged.

Telephone 0990 424 424
www.sony-cp.com

SONY®

If you fancy getting connected, how about connecting with us and sharing your thoughts on Apple, MACFORMAT or anything Mac-related? If your letter is published here you'll win a MACFORMAT binder. (Of course, you could turn to page 142 and order a binder, but hey, when they build networking into Macs that's a hint, okay?)

Share your views and win a MACFORMAT binder. Write to: Alex Summersby, AppleTalk, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, e-mail macformat@futurenet.co.uk

Spreading the word

Much has been written recently about how Apple should get its message across that the Mac is superior to Windoze – where to advertise, what to say, how to say it, and who to say it to. It is also frequently pointed out what a fiercely loyal customer base Apple has, so why not use that customer base to advertise for them? With every piece of hardware and software Apple sells, it should include a voucher on the registration form for a free Apple T-shirt or baseball cap, thus getting the message across to the masses in the street, in the school and in "The Slug & Lettuce". If Apple can increase market awareness, then maybe Dixons, PC World, etc will be nagged into proper promotion and stocking of Mac products instead of treating the Mac like an embarrassing half-cousin of the Wintel world.

Maybe you could start the ball rolling by awarding a Mac T-shirt to the "letter of the month" (starting with this one – XXL please!).

Neil Parrish
St Neots, Cambs.

If only we had any! Tell you what I ***can*** *do: one of those "Windows 95 = Macintosh 89" bumper stickers is on its way!*

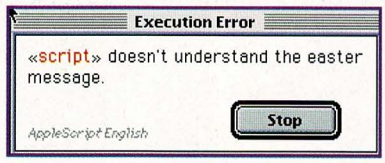
Cruising the Keys

In MACFORMAT 49, we read the idea that you can make an alias of the **Apple Menu Items** folder and put it in itself – very nice! But you can rationalise much further than that, of course. My heart aches when I see someone double-clicking on folders layer after layer to get at things they don't often use – and as for looking for things that way...

I've got everything on my hard disk in five folders (System Folder, two kinds of programs, two kinds of documents), with aliases to those five folders in the Apple menu – so with "sub-menus" turned on, one click-and-drag is enough to open anything up to five layers down, anywhere on the hard disk.

David Kettlewell
via e-mail

Any more clever tricks, shortcuts or hidden Easter Eggs? Send 'em to "Cruising the Keys" at the address above.



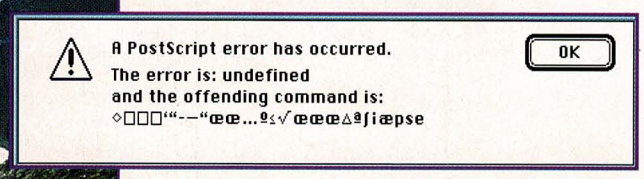
Silly Things Your Mac Says, number 500 in a series: despite writing all his sermons on a Mac, Rev Nigel Coke-Woods of Millom, Cumbria, got this when trying to write an AppleScript to give the date of Easter for any given year...

Chaaaarge!

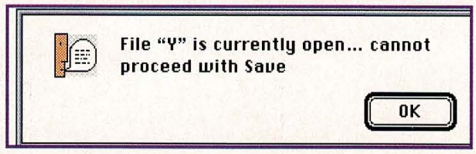
The "Only Apple" advert that arrived in my MACFORMAT today looked about as second-rate as you could get. The front was smudged, and the whole leaflet looked like it was desperately trying to catch up. Some image! Very Pentax K1000 (an old, old, manual workhorse camera). The other colour pamphlets I've received look like something conceived by the incredibly brainy but terminally depressed robot Marvin from *The Hitch Hiker's Guide*. Boring.

I could sell as many PowerMac 6500 Creative Studios as Apple could wish: just show snippets of those really impressive ads created on Macs and tell 'em it was done on a Mac! Everybody would want

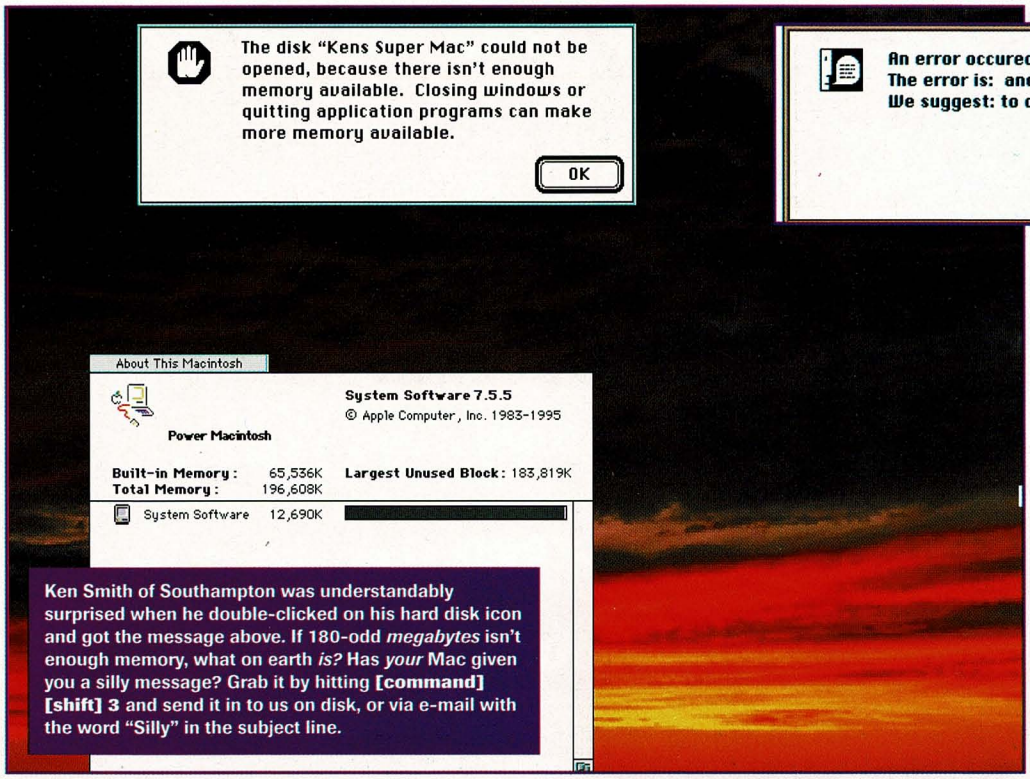
Left: Martin Fisher of Farnham in Surrey was rebuilding the Desktop on his Mac when the progress bar just kept on going! The strain of rebuilding all that scenery, maybe?



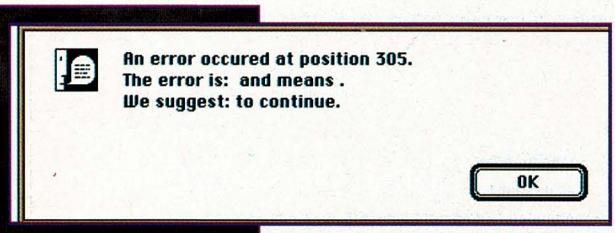
Above: Yep, seems to be a pretty offensive command all right. This message comes from a reader who signs himself "Zorro (The legend lives on...)"...



Simon Rees of Neath, West Glamorgan, got this while using *WordPerfect* – but naturally, he adds "I don't think I've ever named any of my files 'Y'. Oh well."


The disk "Kens Super Mac" could not be opened, because there isn't enough memory available. Closing windows or quitting application programs can make more memory available.
OK
About This Macintosh
System Software 7.5.5
© Apple Computer, Inc. 1983-1995
Power Macintosh
Built-in Memory: 65,536K
Total Memory: 196,608K
Largest Unused Block: 183,819K
System Software 12,690K

Ken Smith of Southampton was understandably surprised when he double-clicked on his hard disk icon and got the message above. If 180-odd *megabytes* isn't enough memory, what on earth *is?* Has *your* Mac given you a silly message? Grab it by hitting **[command] [shift] 3** and send it in to us on disk, or via e-mail with the word "Silly" in the subject line.



Above: A singularly unhelpful error message, sent in by Marc Rawoens of Gent in Belgium, who says it popped up when he was using IRISPen with Apple Events output and *WordPerfect 3.1*. Wonder which of those was to blame then?

to try it at home!

Why are they treading on eggshells? Are they so frightened they won't be able to keep up with demand again? Where are the Mac ads blistering across our screens doing the digital gymnastics that only Macs take so easily in their stride?

The new PowerBook should have dropped jaws clean across computerland, but no, just whisper it to our friends! I know a programmer {PC} who derides Macs and honestly believes he has just bought the state of the art, fastest laptop ever! PowerBook 3400 @ 240MHz? He's never heard of it!

"Only Apple" isn't advertising, it's apologising.

Simon King
via e-mail

Odd, one of the "Only Apple" ads ***was*** *about the 3400 ("Only Apple brings you the fastest notebook in the world"). Pity your programmer friend doesn't read* The Times, *or any of the daily papers, Sunday supplements and trade and business titles where the ads were run. Any other comments on the campaign?*

More games?

In your 50 facts about Apple (MACFORMAT 50) you said that in the last quarter-year, games accounted for 45% of Mac software sales. If this is the case, why do games get so little coverage in MACFORMAT? Magazines such as *PC Format* have previews, work-in-progress reports, release dates as well as reviews by people who actually know what they're talking about (how you could give *Close Combat* such a high mark is beyond me when *Command & Conquer* was just around the corner). But wait, there's more. They actually have a tips section! That's right, tips! I think I've only ever seen one tips section in almost two years of reading MACFORMAT!

I know the PC has a wider range of games and games publishers, but the gap between the two platforms is getting less and less. With the games area of Mac software continuing to grow don't you think it is time you paid it the kind of attention other magazines do?

Ian Goldsworthy, 16
Gloucester, via e-mail

As it happens we do have a big games preview feature coming next issue. What do other readers think? Do you want more games coverage in MACFORMAT? As for tips, they're always welcome. Send them to "Gamebusters" at the address opposite. (But no copying 'em out of PC Format *– Mac codes are often subtly different, and we will catch you out!)*

System 8 Wish List

I know very little about programming, so I could be totally off the mark... but I believe we are going to get a multi-tasking Finder, so these few things should be possible:

1. Drag documents or folders from Finder dialogues onto the Desktop, into Desktop icons (including the Trash) and into open Windows.
2. Open several Finder dialogues simultaneously and drag and drop between them.

By the way, I'm still using mainly System 7.1, which came with my four-year-old Quadra 800. I find it performs much better on my box than any of the 7.5 varieties, but I'm expecting to get an 8600 any day now. I've had it on order for almost two months, and Apple has just announced a new version with a new chip to be released "Mid Summer"... Which reminds me of a joke I heard a few years back:

Q: Brand forgery is rampant in the electronics industry. How can you test that your new computer really is a Mac?

A: Take it to the top floor of your office and drop it out the window. If it becomes obsolete before it hits the pavement it's a Mac.

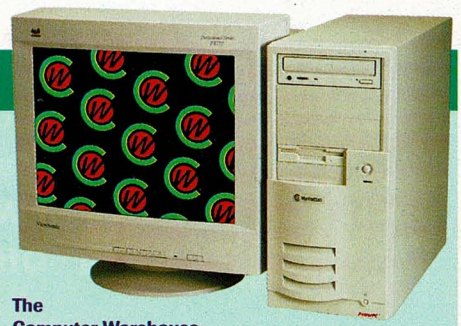
Gunther Berkus, Webmeister
New Media Production
Cork City, Eire, via e-mail

Any more ideas for what you'd like to see in Mac OS 8 – or, indeed, Rhapsody? Write to "System 8 Wish List" at our usual address. (Awful jokes ***not*** *a compulsory accompaniment...)* **MF**

CW Manhattan: a clarification

In last issue's Mac Answers pages, we used a picture of the Manhattan, a Mac OS compatible computer from Computer Warehouse, to illustrate a note on a bug in System 7.6.1. We'd like to make it clear that, as Apple has confirmed, the System software bug disables the Level 2 RAM cache in, and affects the performance of, *all* machines based on the Tanzania motherboard, and most machines based on the Alchemy motherboard, *whatever* maker they come from. As we mentioned, this includes all 603e-based Macs, plus some 604e-based Macs such as Motorola's StarMax range and Computer Warehouse clones.

We used the Manhattan as an illustration simply because it was the most recent Mac clone we had tested that is built on the Tanzania motherboard. We'd like to emphasise that our report concerned an acknowledged bug in Apple's System *software*, and this is in no way a criticism of the Manhattan, which, as another piece in the same Mac Answers pages confirmed, is a fully certified 100% Mac compatible machine (as are all models in CW's range, including the just-announced Paris). We're happy to set the record straight.



The Computer Warehouse Manhattan: so compatible that it's subject to the same software bug in System 7.6.1 that affects all machines based on the same motherboard, from Apple or any other maker.

The UMAX APUS 2000AV

Impressive Specification 32Mb RAM, 1.2Gb hard drive, 8 x CD Rom, 2 PCI slots and a PowerPC 603e processor at 160Mhz.

QuickDraw 3D Acceleration which increases QuickDraw rendering rates to SIX times faster than a Power Macintosh 9600 and can capture still images or QuickTime movies from videotape or camcorder to place in your documents or multimedia presentations.

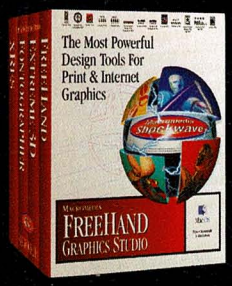
QuickDraw 2D Acceleration which supports display resolutions up to 1152 x 870 and 16.7 million colours.

Connection to any TV screen allows you to play your presentations, movies or latest QuickDraw 3D games on the big screen.

CD-quality SRS 3D surround sound stunning sound quality to match the video capabilities.

Surf the Internet with a speedy 33.6 kbps fax, voicemail and data modem plus 30 days FREE Internet access.

Upgradeable Processor in under five minutes your can upgrade the speed of your machine to 200Mhz, 240Mhz or faster...



PLUS

Included FREE with all Umax Mac™OS computers is Macromedia Freehand Graphics Studio 2, ClarisWorks, FWB CD-ROM , MicroMat TechTool Pro, FaxSTF + Front Office, Internet Ready CD and FWB Hard Disk Toolkit.

UMAX
U GET
MORE

UMAX

For **more** informa
Apus 20

All this for only

£849*

Apus wins MacWorld 97 Award for Best Solution

MacWorld '97 Award Winner

Mac OS 7.6 Pre-installed at test stage

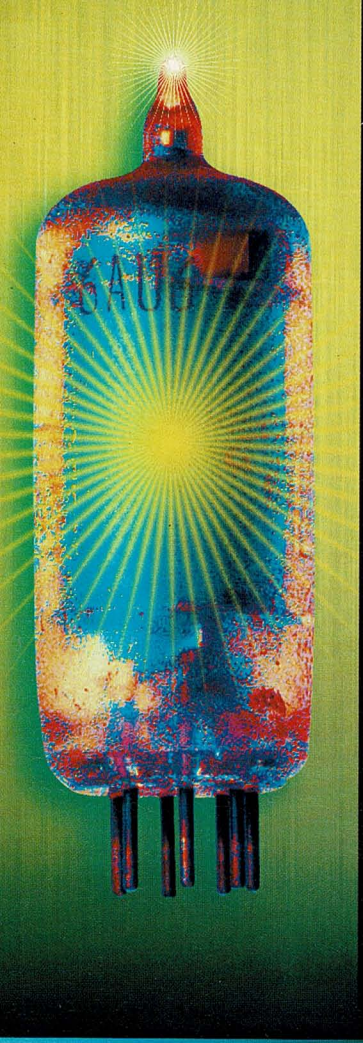
TECHNICAL SUPPORT BY EXPERTS IN THE UK

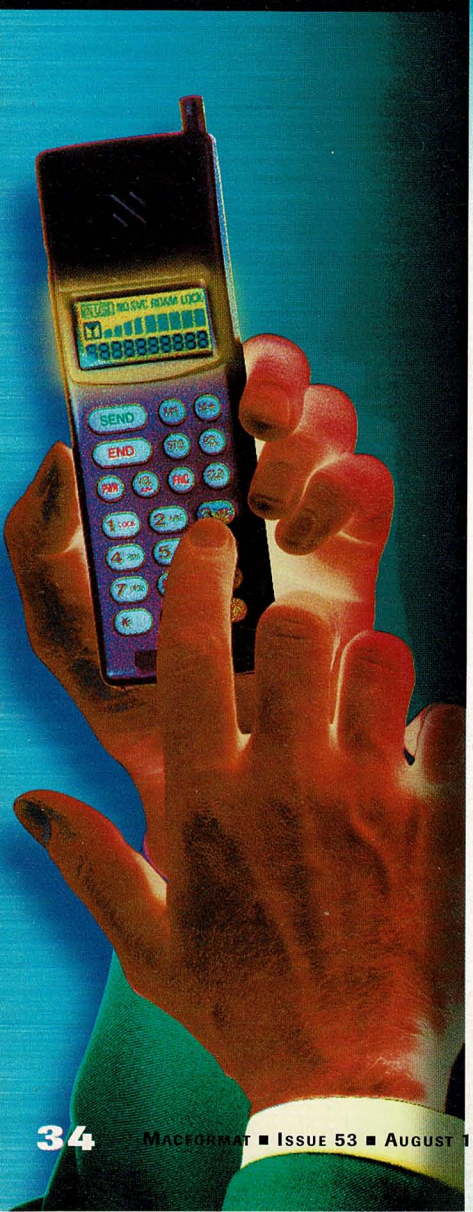
Mac OS Certified by Apple USA

more than just a Macintosh™

All prices excluding VAT
*Price does not include monitor

tion on where you can buy this
00AV call the Umax Hotline on **01344 871329**





Get connected!

No Mac is an island. This issue, MACFORMAT looks at how you can link up with other Macs and computers, whether they're across the room or across the world. Richard Hill is your cyberguide...

The very first Macs were revolutionary in so many ways that today we sometimes take one Mac innovation in particular for granted: Macs are probably still the easiest computers to connect to others.

Want to play a game of *Marathon* with a friend? You can connect your Macs together with the very same serial cable you use to plug in your StyleWriter. Want to join an office network? All Macs come with networking capabilities built-in, many models with the super-fast Ethernet system. Fancy trying the Internet? Well, it's not quite as simple as just plugging in a connector, but there's certainly no computer on which it's simpler...

The Internet is changing the lives of millions. As people catch on to the idea of a global community of computers able to exchange information, the Net is moving from mere hype to a truly productive tool. But don't just take our word for it... We asked some MACFORMAT readers with experience of the Internet what it means for them.

Philip Harvey from Netherbury, Dorset, says: "As my father is studying architecture away from home, we use e-mail a lot for communicating with each other. I use the Web for chatting, downloading demos and shareware, and looking things up. I have enjoyed meeting people from around the world and making new friends."

"I initially got on the Net out of curiosity," admits Steve Howe from Chester. "It soon became a means of advertising my business and publishing my *Chester Virtual Stroll* (**http://www.bwpics.co**

.uk/chester.html). I've enjoyed the chance to publish my photographs and writing, meeting new people and discovering the unexpected!"

Gary Rowland from Colwyn Bay, North Wales, says: "My disability prevents normal access to the world, and I have always been keen on computers since the days of my ZX81. I use e-mail and the Web most often. I enjoy the sheer variety of content that's available and the immediacy of e-mail."

You can play games with someone across the room or send e-mail across the world. You can view a Web page that's located on a computer in the US, just as if you'd created it yourself, or copy a file from a colleague next door as easily as copying it from one folder to another. What's more, new types of network are blurring the lines between internal communications (within a company or college, say) and the external communication of the Net. Soon it won't matter whether a file is on your hard drive, on a colleague's Mac or on the Internet – you'll be able to get exactly the information you need, when you need it. The new Mac OS 8 will make networks more than ever a part of your everyday Mac activities, as we'll be seeing in future issues of MACFORMAT.

This issue, though, we'll look at all the types of connection and show you their strengths. We'll help you choose the best set-up and software for you, from Net utilities to e-mail programs. So read on for the essential guide to getting connected! ➤

In this issue...

Getting to know each other page 36
We explain how local networks have reached out to encompass the Internet, giving you the ultimate in flexible communication channels.

A matter of protocol page 38
Networks and the Internet rely on a confusing array of connection technologies and software systems to work. We guide you through the basics – what each system is and why it's useful.

My Internet page 40
MACFORMAT readers speak out on the rough and the smooth of the Internet.

Cyberspace junction page 42
What to look for when you're choosing an Internet Service Provider, and a handy guide to some Mac-friendly ISPs.

The Net directory page 46
MACFORMAT's guide to essential Internet software. Plus: push channels, Personal Web Sharing and more of the latest developments on the Net.

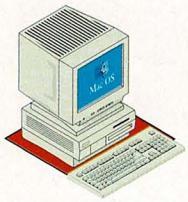
Plus

Modems group test page 70
MACFORMAT tests some of the latest modems from the top makers, and looks at rival technologies battling for your custom. Will 56.6Kbps modems or ISDN do the job for you?

E-mail software head-to-head page 80
Which e-mail software is right for you? Is it worth paying for a full-spec commercial package?

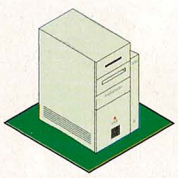
Getting to know each other

Any Mac owner or any organisation can use a combination of internal networks and the Internet to link up with other users.

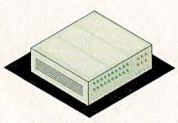


Macintosh
Use your Mac's built-in LocalTalk connection for a network, or a modem for the Net.

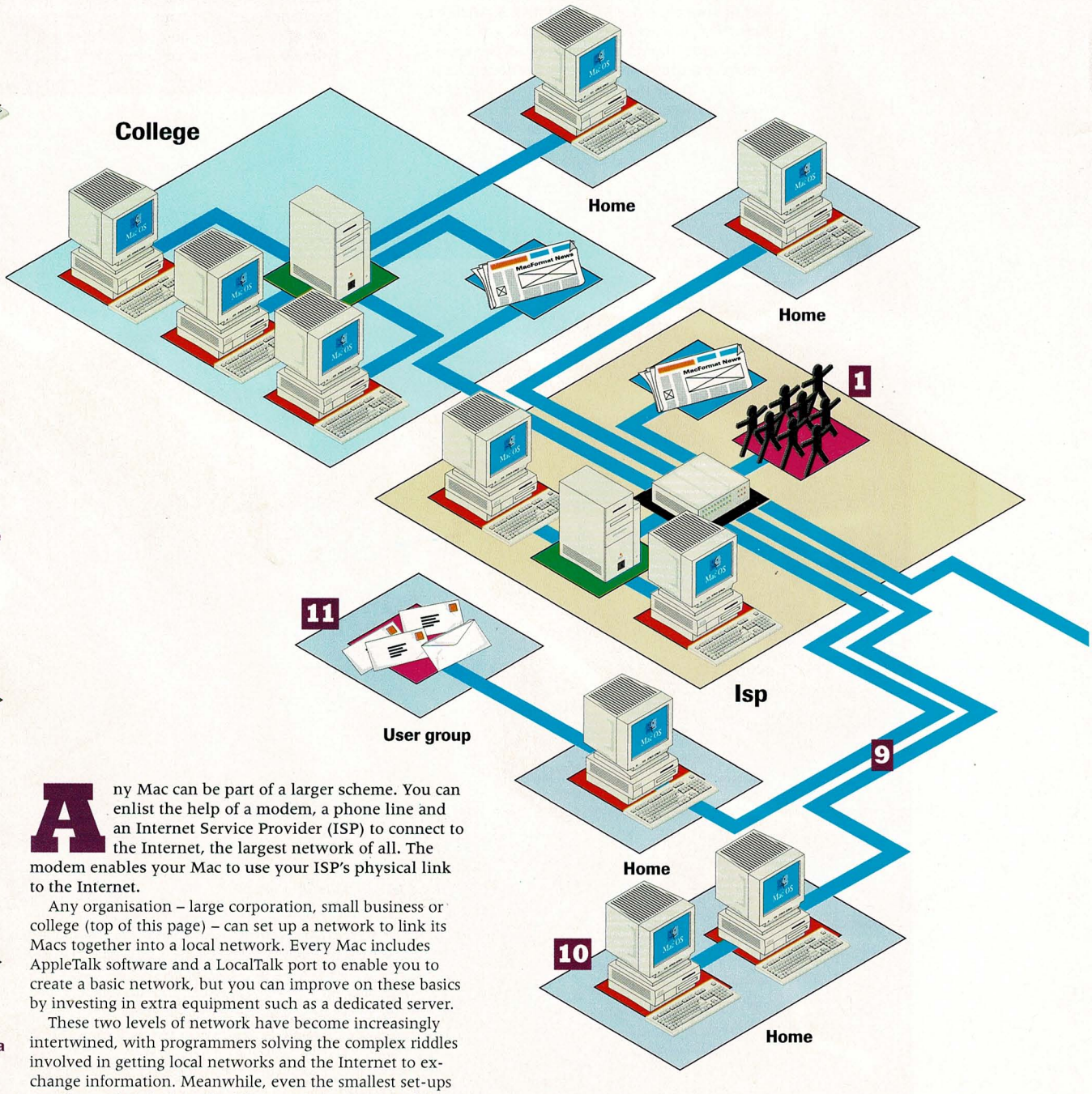
PowerBook
Portable Macs can also link to networks using a modem and remote access software.



Network server
Servers act as the bridge between Macs in a local network at work or college.



Network router
Routers accept data from the Net, then send it through the correct server to reach your Mac.



Any Mac can be part of a larger scheme. You can enlist the help of a modem, a phone line and an Internet Service Provider (ISP) to connect to the Internet, the largest network of all. The modem enables your Mac to use your ISP's physical link to the Internet.

Any organisation – large corporation, small business or college (top of this page) – can set up a network to link its Macs together into a local network. Every Mac includes AppleTalk software and a LocalTalk port to enable you to create a basic network, but you can improve on these basics by investing in extra equipment such as a dedicated server.

These two levels of network have become increasingly intertwined, with programmers solving the complex riddles involved in getting local networks and the Internet to exchange information. Meanwhile, even the smallest set-ups are discovering the benefit of linking their Macs together. Here's MACFORMAT's guide to the various ways it's done...

1 The ISP's set-up is part of the Internet network, enabling you to view Web pages and send e-mail around the world with a local phone call.

2 Future Publishing runs its own Web site to promoté its products. We, the employees, can modify the Web pages by linking to the Web server through our own internal network.

3 You can connect to the Net with a portable Mac. Take a lightweight modem with your PowerBook as you travel from office to office, or use a mobile phone and the GSM system (Global System for Mobile Communications) to send e-mails from anywhere at any time.

4 In search of extra speed, many firms are now looking for ways to bypass the modem and phone line route of file transfer. ISDN (Integrated Services Digital Network) is one alternative. To take advantage of its 68Kbps (kilobits a second) transfer rates, both sender and recipient need to have ISDN.

5 This design group relies on a fast Ethernet network to transfer large image files across its network. This is why many professional PowerMacs (such as the 8600 and 9600) come with Ethernet ports already installed.

6 ISDN is catching on to the extent that some ISPs now offer ISDN Internet accounts.

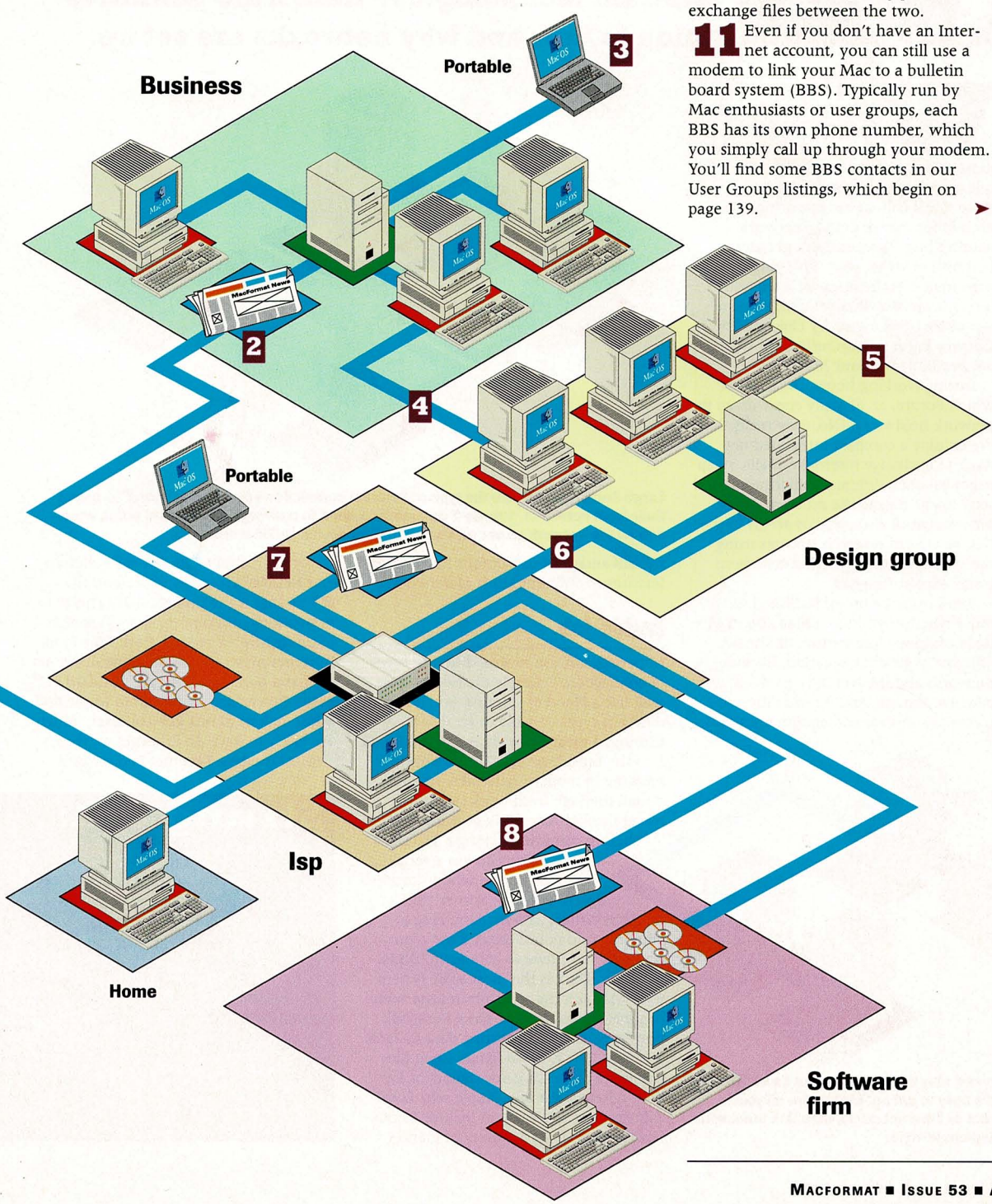
7 An ISP can also host Web pages or an FTP site that *anyone* with an Internet connection can reach. Many ISPs give you space for your Web pages as part of your account.

8 Practically every software firm now hosts a Web site to keep you abreast of developments; often you can also use its FTP site to download software demos and updates.

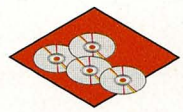
9 Different modems offer different transfer rates: the minimum speed of the modems on sale now is 28.8Kbps, with 33.6Kbps devices also readily available. Modem firms are now releasing 55.6Kbps modems, but there are two rival 56.6Kbps technologies available. This means you could buy a 56.6Kbps modem and see no extra benefit from it if your ISP isn't equipped to handle that particular system.

10 If you have two Macs at home, it's possible to link them together with a single cable, enabling you to exchange files between the two.

11 Even if you don't have an Internet account, you can still use a modem to link your Mac to a bulletin board system (BBS). Typically run by Mac enthusiasts or user groups, each BBS has its own phone number, which you simply call up through your modem. You'll find some BBS contacts in our User Groups listings, which begin on page 139. ➤

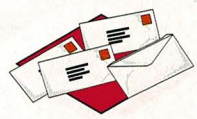


Web server
These servers store pages and multimedia files for displaying over the World Wide Web.



FTP server
FTP sites hold software ready for you to copy to your own Mac in a process called downloading.

Usenet server
Also known as newsgroups, Usenet areas are lively discussion forums.



E-mail server
These handle incoming and outgoing e-mails, ensuring they reach their destinations.

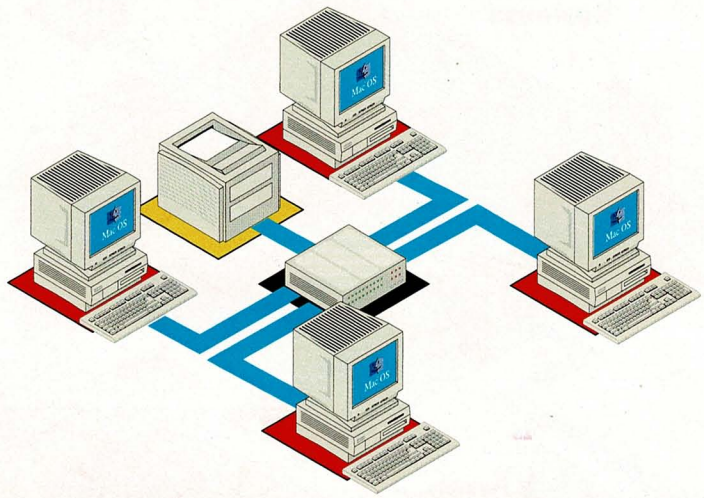
A matter of protocol

The right network set-up can enhance your Mac activities, but why are there so many different technologies? Here's the definitive guide to how and why networks are set up.

Walk through the offices at MACFORMAT and other Future Publishing magazines after work most evenings, and you'll hear the tell-tale sound of weapons blazing and close work colleagues swearing blind at each other. We've got the network gaming bug – games don't get any better than when you're playing human opponents. MACFORMAT relaxes with a four-player *Marathon* session; some of our sister titles swear by *Command & Conquer, Doom* or *WarCraft* (all of which are available for your Mac).

During working hours, the uses for which Future, er, actually constructed its network hold sway. (No, they really do.) We employ a complex integrated network to exchange internal e-mails, swap pages between different departments and send image files to the art team. The same network also gives us access to the Net, so we can research features using the Web or receive e-mail submissions from our contributors.

You can make use of facilities like these whether you use a Mac as part of a large company like Future, in a small office or in glorious isolation. Because networks and the Net have evolved patchily, though, you'll need different pieces of software and equipment to take full advantage of the various networking features of different kinds of network.



Large firms typically use the type of Ethernet connection known as 10base-T to create their local networks. 10base-T connections need to converge on a central point, which can be the network server or a small routing device called a hub.

Inside job

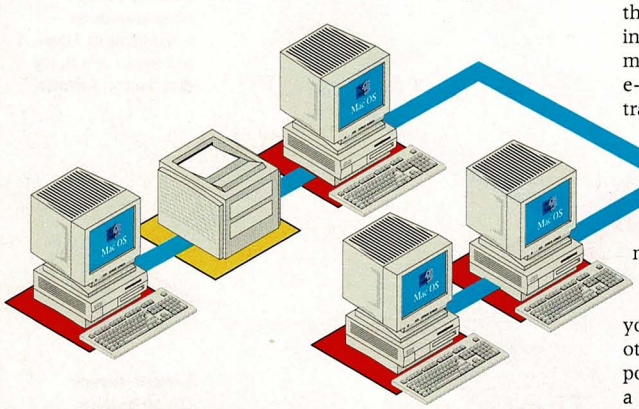
Networks can use several different types of connection – complex networks may well use a blend of systems. You'll use different types of cable to send data through a local network and to send data into the outside world. The two are merging in modern networks, so your e-mail message from work might first travel through LocalTalk or Ethernet before continuing along a T1 line.

■ Any Mac can use a serial connection to send information to a simple printer (like a StyleWriter) or a modem. Plug a modem into your Mac and use a program like *ZTerm* to connect to BBSs.

■ LocalTalk is the most basic system your Mac can use to communicate with other Macs; every Mac has a LocalTalk port, capable of transferring data at 230K a second. Use it to exchange small files like word processing documents or for light network gaming. Apple sells LocalTalk systems; alternatives include PhoneNet systems (from a variety of manufacturers, including its devisor Farallon) and NeuNet (from UK firm Neutral).

■ Ethernet is the professional's choice for networking, offering (in theory) speeds of up to 10Mb a second. Each Mac in an Ethernet network needs its own Ethernet card and port, but these are standard in many PowerMac models from Apple and other makers aimed at businesses, which are likely to have an Ethernet network.

Most modern Ethernet connections



A 10base-2 Ethernet network may not be as elegant as its 10base-T opposite number, but it's easy to set up. Make sure all your Macs have built-in Ethernet or Ethernet cards, then link them with 10base-2 cables in a daisy-chain style.

Strung out:

Linking different machines together is easy if you know what you need. Here is our guide for three common networking situations:

Mac to Mac

You can link two Macs directly with a serial cable – exactly the sort of cable you use to connect a StyleWriter printer to your Mac. Link the Macs through their modem ports for any game that uses a modem or serial protocol, making sure AppleTalk is

use 10base-T (also known as "twisted pair"), a standard type of cable used throughout the telecommunications industries. If a network has more than two Macs using 10base-T cables, it needs to link them together through a central point called a hub. Large firms and colleges use many hubs in their networks.

The alternative is to use thin Ethernet (or 10base-2) connections, which you see where a string of Macs are linked in a chain-like fashion.

The outside world

You also have several choices when it comes to exchanging information across disparate sites:

- Your Mac can use a modem to exchange information through a phone line, across the country or around the world. You can send data through the Internet, the most common option today, or direct to another modem (if you know the phone number and the computer is switched on to receive the information).
- ISDN's supporters see it as the successor to the conventional phone line in many ways. It can transfer data much faster than a phone cable (which was only designed to handle sound), but you can send information only to other places with an ISDN connection.
- High-speed T1 lines make your set-up physically part of the Internet, giving you some of the highest transfer speeds you can get over the Net. Some ISPs offer a lease arrangement for this costly but effective business option.

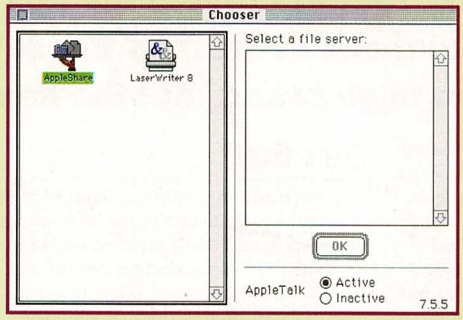
Software protocols

Networks have many tasks to fulfil – electronic mail, file transfer and so on. Each task requires a different system or protocol to help it perform in the most efficient way:

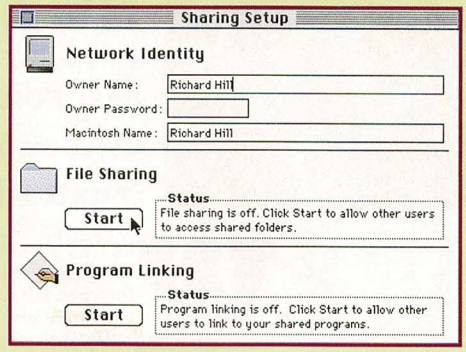
- AppleTalk is the traditional heart of the Mac's networking capabilities. It's the system your Mac uses to send and receive information. Use the **AppleTalk** Control Panel to choose the type of connection (such as LocalTalk or Ethernet) you want. More sophisticated printers (like the LaserWriter) also use AppleTalk because manufacturers have designed them for a network environment. Don't try to use AppleTalk with a serial printer: you'll just get gobbledegook printed out.
- TCP/IP is the Internet's global equivalent of AppleTalk, enabling Internet servers around the world to exchange information. You'll also need it if you want to be part of the Internet: programs like *Netscape Navigator* can't open a connection without it.
- Both AppleTalk and TCP/IP are now part of Open Transport, the networking system used by all Macs with System 7.5 or 7.6. Setting up **File Sharing** (see the "Let's talk" box above) is the same under AppleTalk or Open Transport.
- IPX is a less well-known networking protocol used in PC networks. Its main use on the Mac is to enable you to link to both Macs and PCs for a cross-platform network game. Games like *WarCraft* use IPX to control their network systems. ➤

Let's talk: getting Macs to share

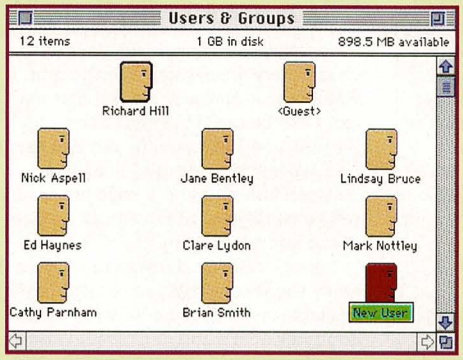
Every Mac with System 7 has straightforward software for setting up a basic connection with other Macs. Make sure you're switched on.



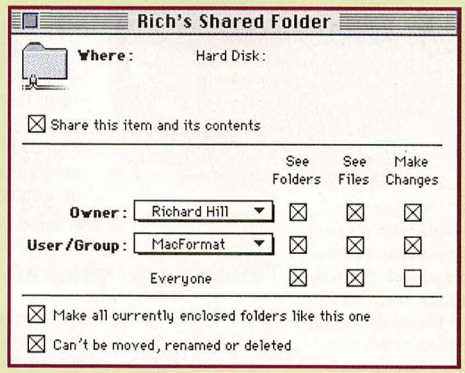
1 Connect up the Macs you want to form a network. Use the Chooser to switch on your AppleTalk connection. Your Mac will then be able to "talk" to any Macs connected to it.


Sharing Setup
Network Identity
Owner Name: Richard Hill
Owner Password:
Macintosh Name: Richard Hill
File Sharing
Start
Status
File sharing is off. Click Start to allow other users to access shared folders.
Program Linking
Start
Status
Program linking is off. Click Start to allow other users to link to your shared programs.

2 You should use each Mac's Sharing Setup Control Panel to give it a name the others will recognise, and then use the File Sharing option to enable others to access files on your Mac (this is known as acting as a "server"). The more Macs you have acting as servers, the slower your network will get, as each sends out signals to the network.



3 Use the Users & Groups Control Panels on each server Mac to decide which Macs can log onto it. Select New User from the File menu to add new users. Double-click on the Guest icon, and you'll be able to activate guest sharing so that anyone can access your Mac.



4 Now nominate a folder on the server Mac's hard disk to host files for sharing. Click on the folder once to highlight it, then select Sharing from the File menu to make it a shared folder and set what "access privileges" different users can have.

linking Macs together

switched off. If you want to exchange files or play a game that uses AppleTalk, you'll need to switch AppleTalk on again and create shared folders (see the "Let's talk" box above).

Mac to PC

Because Macs and PCs use different port designs, you'll need a couple of cables. The first is a standard Mac serial (modem) cable, while the second is a PC-compatible null-modem cable, which you'll find for about £10 at electrical hobby stores like Tandy or your local computer dealer. One end will slot into your Mac modem cable, but you need to ensure that the other end is of the correct design to plug into the PC you're using.

If you have Mac and PC versions of a networkable game, you can now play against each other. Most cross-platform games of this type use the IPX protocol to swap information, although some use TCP/IP – see the game's manual for details. You can also use terminal emulation software to exchange files.

Mac to Mac to Mac...

Pound for pound, the fastest and most reliable network for a few Macs is Ethernet. Recognising the potential of the small business market, many network specialist firms now offer low-cost hubs for five or more Macs.

Each of the Macs in your network will need Ethernet capabilities. Most professional PowerMacs already have everything you need (see our Mac Facts table on page 122 to check yours), but you can buy a card for any Mac's PCI or NuBus expansion slot. You can buy 10base-T cables up to 50 feet long; plan the right arrangement of Macs and cables for your setting, then link all the Macs through the hub before switching on File Sharing.

My Internet

MACFORMAT readers reveal the ups and downs of their own experiences of the Net. There's enough trouble and frustration to go round, but the hassle is worth it.

When we wanted to know what you thought of the Internet, we soon realised there was no better way than using the Net itself to find out. These are some of the responses MACFORMAT received when we sent out an e-mail questionnaire asking some of our readers about their Net likes and dislikes.

AOL is a popular service with its own software and exclusive pages. You only pay for these as you use them, but to get an idea of what it offers before you decide, try it out using the software and 50 free hours use we included with MACFORMAT 50 (UK only).

These are real Internet users and real experiences. The people here have adapted, learning to accept the rough with the smooth in their Internet use. It's by no means a perfect technology, but the Net has a lot to offer.

"Hassle-free programs"

I use an average range of programs – *Netscape 3*, *Fetch*, *NewsWatcher*, *Eudora Light* – but they're all hassle-free and I'd recommend them to anyone. I use a thing called *Netscape History*, an off-line Web page reader, which is really useful.

I've enjoyed the chance to publish my photographs and writing, meeting new people and discovering the unexpected! My least favourite parts have been trying to use **RealAudio** without an FPU and the large number of dull magazines...

Steve Howe, Chester

Are Trekkies wrecking the Internet? Maybe not, but many readers are frustrated by the Net's frequent sluggishness.

"Slow"

My father and I both decided to get onto the Internet for information, e-mail and because we could use it during cheap-rate phone times.

Our Internet Service Provider is West Dorset Internet. The service is cheap: we got a free e-mail address, 500K free Web space (which we have not used yet) and unlimited access – no limited hours or anything like that – for £17.60 per month. The slow speed of downloading and refresh on animations is annoying. The most annoying thing is when someone else's server goes down and you lose your contact.

Philip Harvey, Netherbury, Dorset

"It's free!"

My Net access is via Bristol University, so it's free! I use e-mail and the Web; e-mail is cheap, quick, and a great way to keep in touch. The worst thing about the Net is waiting for hours and hours to get a piece of information from an American Web site because thousands of Trekkie nerds are clogging up the lines!

Robert White-Adams, Bristol

"Macs are an afterthought"

I use CompuServe, but feel Macs are treated very much as an afterthought. I do like the e-mail and the fact that payment can be made by direct debit – it's the cheapest I've found to join and use. I find *Netscape* provides all I need in a browser: although it is a large program, it can be configured to provide all services in the same package.

I use e-mail and the Web most often. I enjoy the sheer variety of content that's available and the immediacy of e-mail. I don't like access and downloading times, and the general unreliability of the Web (in my experience anyway).

Gary Rowlands, Colwyn Bay, Wales

"Trying to improve"

Apart from minor gripes, Demon has been a very good provider for a Mac user. Any problem areas, for example with the newsgroup service, have been explained through the regular e-mail updates, so we always know what to expect, and we feel that Demon is always trying to improve itself.

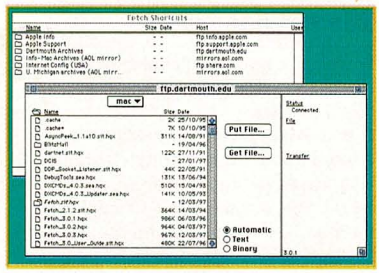
I like the feeling of being at the start of something new. As a Mac owner, I find the Internet provides access to material at the same time as PC users; there is no need to wait for things to be converted for the Mac. It's still easy to feel slightly smug when PC owners talk about the problems they have in actually using their Internet software too.

Andrew Fraser, Poole, Dorset

"Simple and clear"

I became interested in the Internet through reading about sites. It looked interesting and useful for gathering information worldwide on any sort of subject. Many companies now give Web addresses as well as postal ones.

CompuServe 3.0 has served me without problems. It's simple and clear, with an attractive screen appearance. All help calls to CompuServe have been dealt with efficiently. As soon as I explain that I use a Mac, I am put on to people who appear to have been picked for their Mac knowledge.



Web browsers may have absorbed many separate functions of the Net, but individual programs like *Fetch* are still useful.

I enjoy the contact with family and friends, especially in the US, through e-mail. I do browse as well, but not very seriously yet. The most annoying experience is when my Mac freezes or crashes during a download from the Web.

Ron Williams, Tansley, Derbyshire

"Too expensive"

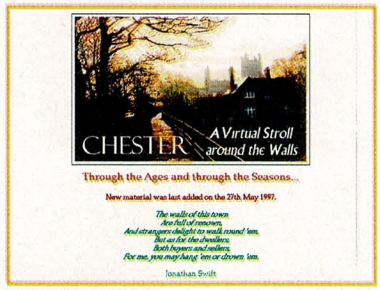
I use the Net for travel and business news. I was with CompuServe – it was far too expensive and I didn't like the service provided. AOL is much easier to use, except for its **"Host has failed to connect"** messages. E-mailing other students for notes on my course has been a godsend, especially during exam time.

Susan Rendell, Newport, Gwent

"Beautiful"

I use the Web to get information – my favourite is a beautiful picture of Comet Hale-Bopp. Demon is affordable yet comprehensive, although it only seems to provide up-to-date software for PCs, not Macs. Downloads are also slow at times.

Bernard Refson, Penryn, Cornwall ➤


CHESTER
A Virtual Stroll around the Walls
Through the Ages and through the Seasons...
New material was last added on the 27th May 1997.
Jonathan Swift

Many of our readers love the creative possibilities the Web opens up. Look out for more on Web creativity next issue.

THIS MONTH IN

the internet magazine

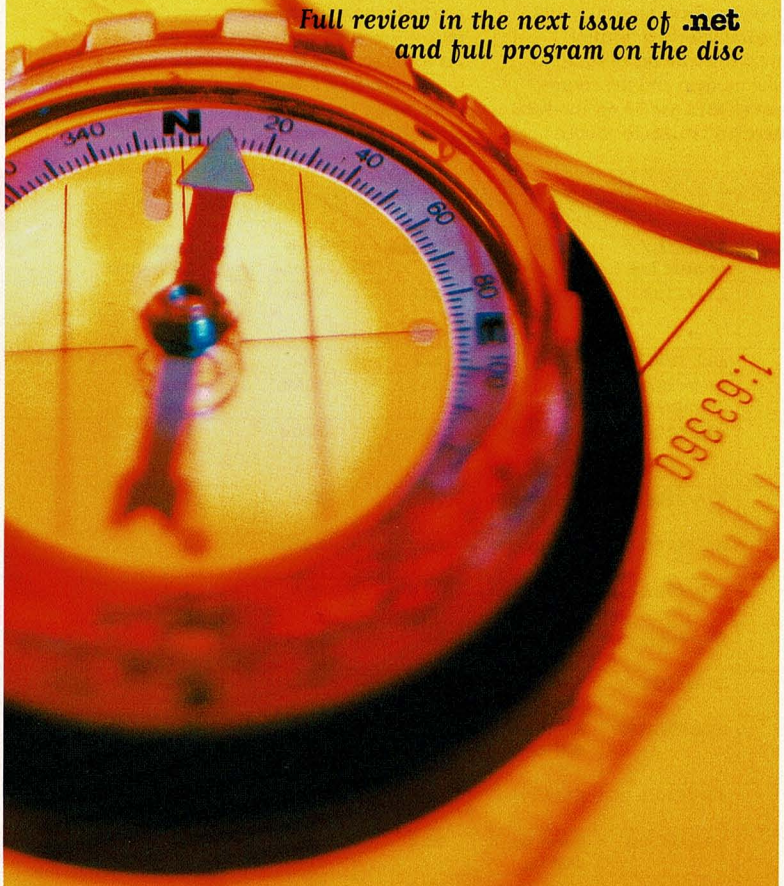
GREAT NEW LOOK!

.net

NETSCAPE 4

The ultimate Net navigator?

Full review in the next issue of **.net** *and full program on the disc*



GET STARTED ON THE INTERNET!
16 pages of expert advice for Net newcomers

STOP THE VIRUS INVASION!
Complete guide to on-line viruses (and how to kill them)

UPDATE AND SURVIVE!
How the Net can upgrade your software (for free)

ON THE DISC
● NETSCAPE COMMUNICATOR AND NAVIGATOR 4
● PROTECT YOURSELF FROM ON-LINE VIRUSES ● BROWSE THE WEB OFF-LINE ● UPDATE YOUR SOFTWARE

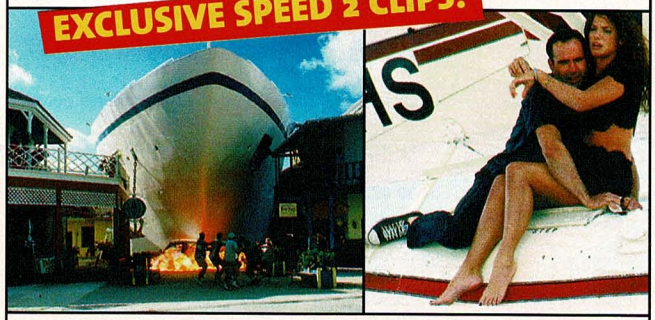
July issue on sale Thursday 26 June
£3.95 with CD-ROM ● £2.95 without

http://www.futurenet.co.uk/

FREE 3D SPEX *for every reader!*

Web 3d

EXCLUSIVE SPEED 2 CLIPS!



Catch a sneak peek of Ms Bullock's August blockbuster a month early on the second Connect CD, along with... The Simpsons, The X Files, Men In Black, Blur, The Verve, Goldie, Depeche Mode, Embrace, Pamela Anderson in Married With Children and six of the best from Massive Attack. Including their latest single. Nice!

CONNECT

The Essential Guide To Net Entertainment

Second Issue On Sale

Future PUBLISHING

4th July

Cyberspace junction

If you want to get on-line, you need an Internet Service Provider. But how do you choose and who can you call?

ISPs maintain big powerful computers that can link you directly to the Internet over a phone or sometimes via a cable link. This kind of connection – known as a dial-up link – is the cheapest and most popular way to get on-line.

All ISPs vary, especially where cost is concerned, although they all provide more or less the same services – access to the Web, news, e-mail, and various file archives. The differences come in the less obvious aspects of the quality of the service – the support hours, the speed of the connection, and the kind of software they offer. Some offer exclusive content available to subscribers only, like AOL's "areas" or CompuServe's "forums".

There are two elements of speed to consider: the modem and the connection. Almost all ISPs use 33.6K modems now, so there isn't much to choose between them at this level. But an ISP's true speed is measured in the time it takes to get things done – download your e-mail, read a Web page, and so on.

The connection speed is measured approximately by the user-to-modem ratio – the more users there are trying to get a connection, the more likely you are to get an engaged tone. A ratio of 30 is poor, while 10 or less is great. The ideal is never to get an engaged tone, and some

Some Mac-friendly Internet Service Providers

Name	Sales phone	URL	Start-up	Monthly/ annual fee	ISDN	Speed	Web space	E-mail addresses
Abel Internet	0131 445 5555	http://www.abel.net.uk/	£18	£11/£133	POA	33.6	5Mb	Multi
Amity Internet	0500 200171	http://www.amity.co.uk/	£18	£12/£98.70	POA	33.6	3Mb	1
AOL	0800 2791234	http://www.aol.com/	Free	£5 for 5hrs a month/£71	Not available	33.6	10Mb	5
Atlas Internet	0171 312 0400	http://www.atlas.co.uk/	£29	£14/£169	£295/year	28.8	None	1
Bogomip Internet	0800 137536	http://www.bogo.co.uk/	£29	£14/£165	£23/month	33.6	2Mb	1
BT Net	0800 800001	http://www.btinternet.com/	Free	£12/£130	£12/month	33.6	2.5Mb	5
Colloquium	0500 008543	http://www.colloquium.co.uk/	Free	£14/£169	£24/month	33.6	2Mb	1
CompuServe Interactive	0990 000200	http://www.compuserve.co.uk/	Free	£6.50/£74	Same as dial-up	56	5Mb	1
Demon Internet	0181 371 1234	http://www.demon.net/	£15	£12/£130	Same as dial-up	33.6	5Mb	Multi
Direct Connection	0800 0720000	http://www.dircon.net/	£9	£13.50/£162	Same as dial-up	33.6	5Mb	1
Easynet	0171 681 4444	http://www.easynet.co.uk/	£29	£14/£169	£177	28.8	Unlimited	1
Global Internet	0181 957 1000	http://www.globalnet.co.uk/	£12	£8.81/£106	Same as dial-up	33.6	3Mb	1
MacLine Internet	0181 401 1111	http://www.macline.co.uk/	£29	£14/£153	£323/year	28.8	None	1
NetGates	0117 907 4000	http://www.netgates.co.uk/	Free	£15/£176	Same as dial-up	33.6	5Mb	5
NetMatters	0345 573350	http://www.netmatters.co.uk/	£14	£12/£118	£24/month	33.6	5Mb	1
Nildram	0800 0720400	http://www.nildram.net/	Free	£12/£118	Same as dial-up	33.6	5Mb	1
Pavilion	01273 607072	http://www.pavilion.net/	£18	£15/£118	Same as dial-up	33.6	Unlimited	1
Pipex Dial (Uunet)	0500 474739	http://www.dial.pipex.com/info	£12	£18/£211	Not available	56	2Mb	5
Poptel	0161 908 0024	http://www.poptel.net/	£18	£15/£170	Not available	33.6	None	1
Power Internet	01908 503126	http://www.powernet.co.uk/	Free	£14/£155	Same as dial-up	33.6	5Mb	Multi
REDNET	01494 511640	http://www.red.net/	£29	£18/£200	By the summer	33.6	3Mb	10
TriNet	01539 731000	http://www.trinetimb.com/	£22	£18/£183	£47	56	None	Multi
UK Online	01749 333313	http://www.ukonline.co.uk/	Free	£10/£110	Same as dial-up	33.6	Unlimited	1

ISPs attempt to offer a commitment to this instead of quoting a ratio.

Support is especially important if you are a beginner. Many ISPs expect you to know all about domain name servers, TCP/IP settings and PPP masks. If you are a beginner, what you ideally need is a pre-configured plug-in-and-go software suite that installs itself and keeps all these details well hidden. So it's a good idea to ask if any software supplied comes pre-configured or not.

Technical support availability is also important. If you use the Internet from home but can only get help during office hours, you'll be left stuck if you have problems during the evening or at the weekend. It's also useful to check just how Mac literate the support staff are. As a good rule of thumb, you can tell a lot about a company by the quality of its support staff. If you come across someone who's unhelpful and has no idea what they're talking about – and this does happen – the chances are that this is a good indication of the quality of service that company offers in general.

What you need

Most ISPs offer some basic software to get you started, and then assume you'll be able to find something better on the Internet itself. While it's true that you can download software off the Net, it's unwise to assume that you'll be able to do this straightaway. So, to get going you need a recent version of a Web browser (usually *Internet Explorer* or *Netscape Navigator*), e-mail software *(Eudora Light* is popular), news software *(NewsWatcher)* and an FTP package *(Fetch)*. Anything less will make life awkward for you, though some services have their own, perfectly adequate proprietary software – AOL's was on the MACFORMAT 50 Cover CD (UK only), with 50 hours' free access (excluding phone bills) so you can try it out.

Also check how the software is delivered. One or two ISPs offer their software via download only, so you'll have to spend a few hours on the phone to them before you can use it.

Finally, it's useful to check how flexible an ISP is. On the one hand you may want a professional ISDN connection, preferably without a surcharge; on the other, you may just want to check your mail once a day. Some ISPs offer "budget" accounts for light use. Also, look for cheaper up-front payments. Many ISPs offer a 10-for-12 deal if you pay for a year up front, or quarterly payments.

Below is a selection of Mac-friendly ISPs that we've checked out. Prices quoted include VAT. **RICHARD WENTK**

Try out some of the software mentioned here on this issue's Cover CDs.

Users per modem	UK local call area	Subscribers	Software	Support	Notes
8	All UK	10,000+	CyberPatrol, IE 3.0, Navigator 3.01, Eudora Light 3.0.2, IRCLE 3.0/2.5, NewsWatcher 2.1.6, dialler	7 days 9am – 11pm	Free month for every friend introduced
8	London	4,000	IE 3.01, pre-configured dialler	6 days 9am – 6pm	Free seven-day trial for businesses
Not quoted	All UK	Not available	MacAOL (Proprietary)	6 days 8am – 10:30 pm (to 5:30pm Sat)	£1.85 per hour once initial 5 hours are used up
30 (6 for ISDN)	All UK	3,000	Dialler, IE 3.0, Eudora Light 3.0.2	7 days 10am – 8pm (to 4pm w/e)	Support is only available for annual and quarterly subscribers and costs 9.8p/min peak, 2.5p/min off-peak
16	M25 area	Not available	Eudora 1.0, NewsWatcher, Netscape 1.1, Telnet, Anarchie, dialler	7 days 10am – 8pm (to 5pm w/e)	Local mirror of TUCOWS shareware site. Funky hold music
Not quoted	All UK	17,000	Eudora Light 3.0.2, IE 3.0, NewsWatcher, dialler	7 days, 24 hours, local call rate	Low-cost plan for light users – £4.75/month for 3 hours, then £2.35/hour
18	All UK	2,000	Eudora 1.51, NewsWatcher, Mosaic 2, NCSA Telnet, Fetch, dialler	7 days, 24 hours	Proxy Web & FTP server – will cache files from slow sites if asked
Not quoted	All UK	400,000	MacCim (Proprietary)	7 days, 8am to midnight	£1.95/hr once initial 5 hours are used up. Premium services are even more expensive
Not quoted	All UK	100,000	Addmail, Config PPP, Eudora, Fetch ClarisWorks, installer	7 days, 24 hours	
10	All UK	17,000	IE 3.0/2.1, Eudora Light 1.54, Mail&News 1.1, StuffIt 3.0, Anarchie 2.01, dialler	7 days 9am – 9pm (10am – 5pm w/e)	
14 (2 for ISDN)	All UK	12,000	Eudora Light, Netscape, dialler	7 days 9am – 9pm (10am – 6pm w/e)	
<25	All UK	17,000	IE 3.0, dialler	7 days 9am – 9pm (10am – 6pm w/e)	Start-up fee waived for annual payments
30	All UK	N/A	See Atlas (above)	7 days 10am – 8pm (10am – 4pm w/e)	In spite of the Mac-friendly name, MacLine is really just an Atlas re-seller
<15	All UK	Not available	Netscape 2, Eudora Light, Fetch, NCSA Telnet, dialler	6 days 9am – 9pm (9am – 5pm Sat)	
15	All UK	2,100	Netscape Navigator, Eudora Light FreePPP, 100Mb CD of utilities	7 days 8am – 8pm	£6/Mb/month for extra Web space
20 (10 for ISDN)	100%	2,000	Eudora Light, Fetch	5 days 9am - 11pm	Budget account available (£5 for 10 hrs a month)
"No engaged tones" policy	All UK	2,000	IE 3.02, Eudora Light, Mail&News, dialler	5 days 9am – 5.30pm	
Not quoted	All UK	50,000	Apple Internet Connection Kit	6 days 9am – 8pm (10am – 6pm Sat)	ISDN due soon
Not quoted	All UK	4000	Fetch, NewsWatcher, Eudora Light, StuffIt Expander, Telnet 2.7	5 days 9.30 – 6pm	Plus account for £17/month offers access to GeoNet. ISDN is only available for business network users
15	Most of UK	2000	Eudora Light 1.5.2, News Express, Navigator 1.1, Gopher, Fetch, dialler	7 days, 24 hours	Cable modem account £12/month. Budget accounts from £4.50 month. Software only available for download – not supplied
<30	All UK	Not available	Netscape 2, Eudora Light 1.4, Nuntius news, Fetch, dialler	6 days 8am – 5.30am (10am -4pm Sat)	
15	All UK	5,000	AICK, Netscape 3, Claris Emailer 1.03 (or IE 2.01, Eudora Light v1 for FreePPP for £5)	6 days 9am – 6pm (9am-4pm Sat)	Local call access for whole of Europe by August.
Not quoted	All UK	Not available	IE 2.1	7 days 9am – 11pm	£14.99/month for 4 e-mail accounts

Mygate

Your Preferred Mac OS Dealer

Motorola StarMax Range

Fast and powerful 603e & 604e Desktop and Mini Tower systems with a 5 year warranty.

3250 (MT), 4160 (D), 4200 (D) and 4200 (MT) all come with FREE Zip Drives. (whilst stocks last) FREE

Educational prices available on most models, please call

from £799

see main listings for prices and specs

Epson Stylus 600 & 800

- A4 Colour Inkjets
- 1440 dpi on coated paper
- 720 dpi on plain paper
- PostScript, Localtalk and Ethernet option on Stylus 800

Epson Stylus 600 £215
Epson Stylus 800 £315

from £215

High Capacity Hard Drives

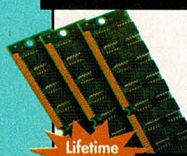
These high capacity internal SCSI hard drives have fast access times and are very reliable.

2GB internal SCSI HD £199
3GB internal SCSI HD £239

9GB external SCSI HD also available now only £899

from £199

Unbeatable RAM Prices!



16Mb 72 pin SIMMs **only £57**
16Mb 168 pin DIMMs **only £58**
16Mb EDO DIMMs **only £63**

32Mb 72 pin SIMMs **only £113**
32Mb 168 pin DIMMs **only £115**
32Mb EDO DIMMs **only £123**

Lifetime Warranty

16Mb DIMMS only £58

Iomega Jaz & Zip drives

- 100Mb Zip drive +1cart **£95**
- 1Gb Jaz drive (no cart) **£215**
- Zip carts **£11** • **£9** each (6 pk)
- Jaz carts **£60** • **£58** each (3 pk)
- Internal Zip drive **only £99**
- Internal Jaz drive **only £275**
- Bezels and fitting kits **from £25**

from £95

Umax Astra 600s

NEW!

- A4 flatbed scanner
- 300x600 dpi (up to 4800dpi)
- 30 bit colour, single pass
- Max. scan area 216x297
- Comes bundled with Presto! Page Manager and Umax VistaScan software

only £169

GV Teleport Platinum I.E.

Connect to the Internet faster with the Teleport Platinum Internet Edition 33.6 kbps fax modem from Global Village.

(Geoport Macs only)

only £115

APPLE SYSTEMS

New speed bumped PowerMac 5400,5500,6400 and 6500 now available

Best Buy	Perf 5400/160 16/1.6Gb 8xCD, 28.8 Modem & Kb	New LOW Price	£	875
	Perf 5400/180 16/1.6Gb 8xCD/28.8M/TV V-In & Kb		£	1,199
	Perf 6400/180 16/1.6Gb 8xCD, 28.8 Modem& kb		£	849
	Perf 6400/200 16/2.4Gb 8xCD/28.8 M/L2 cache & kb		£	999
	Creative Studio 6400/200/24/2.4Gb/CD/28.8/TV/kb		£	1,369

PowerMac 5400 and 6400 now available with low cost StyleWriter printers

Call Mygate for the "best deals" on Apple Performa and printer bundles

Best Buy	PowerMac 4400/160 16/1200 8xCD & kb	New LOW Price	£	659
	PowerMac 4400/200 16/1.2Gb 8xCD/Ext kb		£	899
	PowerMac 4400/200 16/2Gb 8xCD/L2 Cache/Ethernet/kb		£	1049
Best Buy	PM 7300/166 16/2Gb 12xCD/MS Office/Ext kb	New LOW Price	£	1549
Best Buy	PM 7300/200 32/2Gb 12xCD/MS Office/Ext kb	New LOW Price	£	1849
	PM 8600/200 32/2Gb 12xCD/L2 Cache/Zip/Ext kb		£	2199
	PowerMac 9600/233 32/4GB 12xCD/L2 C/IMS/Ext kb		£	2899
	PM 9600/200MP 32/4Gb 12xCD/L2 C/IMS/Ext kb		£	3249

UMAX MAC OS CLONE SYSTEMS

Best Buy	Umax Apus 2000/160 16/1.2Gb 8xCD & Kb	While stocks last	£	595
	Umax Apus 3000/200 16/2.1Gb 8xCD & Kb		£	1,025
	Umax Pulsar 200AV 32/2100 8xCD/ATI /Kb		£	2,175
Best Buy	Umax Pulsar 225 32/4 Gb 8xCD/4Mb Video Card /Kb		£	2,375

MOTOROLA MAC OS CLONE SYSTEMS

Motorola StarMax 3180/180 16/1200 8xCD/Kb (D)	£	799
Motorola StarMax 3180/180 32/2500 8xCD/Kb (T)	£	899
Motorola StarMax 3200/200 16/1200 8xCD/Kb (D)	£	1,099
Motorola StarMax 3200/200 32/2500 8xCD/Kb (T)	£	1,249
StarMax 3240/240 32/2500 8xCD/Kb (T) + FREE Zip drive	£	1,599
StarMax 4160/160 16/1200 8xCD/Kb (D) + FREE Zip or 32Mb RAM	£	1,299
StarMax 4160/160 32/2500 8xCD/Kb (T)	£	1,499
StarMax 4200/200 16/1200 8xCD/Kb (D)+ FREE Zip & 16Mb RAM	£	1,849
StarMax 4200/200 32/2500 8xCD/Kb (T) +FREE Zip drive	£	1,949

POWERBOOKS

PowerBook 1400cs/117 12/750	£	999
PowerBook 1400cs/117 16/750 CD w/CSW 2200	£	1,399
PowerBook 1400c/133 16/1000 CD	£	2,049
PowerBook 3400c/180 16/1.3 Gb	£	2,749
PowerBook 3400c/180 16/1.3 Gb, CD & Ethernet	£	3,049
PowerBook 3400c/240 16/3Gb, CD & Ethernet	£	4,099

MEMORY/VIDEO RAM - Prices subject to market fluctuations

4Mb 30-pin SIMM	£	26
16 Mb 72-pin SIMM	£	57
32Mb 72-pin SIMM	£	113
16Mb 168-pin DIMM	£	58
32Mb 168-pin DIMM	£	115
64Mb 168-pin DIMM	£	229
16Mb 168-pin DIMM EDO 3.3v 4400/Starmax	£	63
32Mb 168-pin DIMM EDO 3.3v 4400/Starmax	£	123
64Mb 168-pin DIMM (EDO 3.3v) for PM4400/Starmax	£	245
16Mb Powerbook 1400 Series	£	89
24Mb Powerbook 1400 Series (New LOW Price)	£	125
16Mb Powerbook 3400 Series (New LOW Price)	£	95
32Mb Powerbook 3400 Series	£	169
1Mb VRAM DIMM (PM72/75/76/8500/IMS 2MB PCI)	£	25
2Mb VRAM DIMM EDO (4400/StarMax)	£	39
4Mb VRAM DIMM EDO (4400/StarMax)	£	59

STORAGE

2Gb internal hard drive		£	199
3Gb internal hard drive		£	239
4Gb internal hard drive	New LOW Price	£	375
9Gb external hard drive		£	899
Iomega 100Mb Zip Drive with 1 cart, cables & s/w		£	95
Syquest EZFlyer 230 Drive with 1 cart, cables & s/w		£	165
d2 1Gb Ext Jaz Drive w/ 1 cart,cables & s/w (Eko)	New LOW Price	£	265
Best Buy 12x Speed CD-ROM Drive		£	139
Formac (Yamaha) 4xW/6xR CD Writer with Toast Pro	New LOW Price	£	459
Fujitsu 640Mb Optical Drive w/ 1 cart, cables & s/w		£	355

PRINTERS - supplied with FREE serial cable

Apple Colour StyleWriter 1500 (when purchased with a Performa)	£	99
Canon BJC 4550 A3 Colour Inkjet	£	299
NEW! Epson Stylus Photo A4	£	325
Epson Stylus Colour 1520	£	599
HP Laserjet 6MP	£	599
Best Buy HP Laserjet 5M	£	1,049

PLEASE CALL FOR TONER, PAPER & INK CONSUMABLES

MONITORS - supplied with FREE Mac adaptor

Apple Multiple Scan 15" AV display (£250 if bundled with PM 64/6500)	£	299
AppleVision 1710 display	£	499
Formac ProNitron F17 display	£	325
Mitsubishi 67TXV 17" Display	£	399
Sony Multiscan 100sx 15" Trinitron display	£	249
Sony Multiscan 300sf 20" Trintron display	£	999

PLEASE ASK ABOUT OUR MONITOR AND CPU BUNDLES

GRAPHICS/VIDEO CARDS

Formac Pro Media 20 (2Mb/64 bit 3D PCI Card)	£	99
Formac Pro Media 40 (4Mb/64 bit 3D PCI Card)	£	139
Formac ProVision 4/60 128 bit PCI Card	£	239
Formac Pro Formance 80 PCI Graphics Card (New LOW Price)	£	359
Matrox Millenium 4Mb PCI Card	£	149
Best Buy Matrox Millenium 8Mb PCI Card	£	249
Xceed 24-bit PDS Card LCIII/475/630/Performa	£	375

SCANNERS/DIGITAL CAMERAS

Linotype-Hell Saphir with full Photoshop	£	1,549
Nikon SuperCoolScan (New LOW Price)	£	1,249
UMAX SuperVista S12	from £	325
NEW! UMAX PowerLook ColourStudio II	from £	749
Kodak DC50 Digital Camera	£	415
Sony DK-1 Digital Camera	£	1,349

SOFTWARE

Adobe Publishing Collection (Photoshop,Illustrator,PageMaker&Acrobat Pro)	£	849
NEW! Adobe Illustrator 7.0	£	275
Adobe Illustrator Upgrade from x.x to 7.0	£	85
Adobe Photoshop 4.0	£	375
Apple Internet Connection Kit (CD)	£	35
Artlantis Render 2.1	£	359
Claris FileMaker Pro 3.0	£	149
Best Buy Claris Works 4.0 Internet Edition	£	79
Connectix RAM Doubler 2	£	39
Dr Solomons Anti-virus kit	£	59
IMacOS 7.6	£	58
Microsoft Office 4.2.1	£	349
MiniCad 6.0	£	449
NEW! Norton Utilities 3.5	£	75
NEW! One Click Macro Utilities - shortcut software (WWW)	£	69
Powerprint	£	79
QuarkXPress 3.32	£	619
QuarkImmedia (bundle with Xpress £1,049)	£	675
Stylescript Postscript software	£	79

Call for many more software titles and upgrades not listed.

COMMUNICATIONS

Global Village 33.6 Internet Edition	£	115
NEW! Pace Microlin 33.6 Modem	£	99
US Robotics Sportster Voice 33.6 Mac Fax Modem	£	115
Motorola 33.6 PCMCIA Modem Card for PowerBooks	£	135

ACCESSORIES

Wacom ArtPad II (A6) with Dabbler	£	99
Wacom UltraPad A5 (ADB) with MacroMedia FGS	£	199
Wacom UltraPad A4 with MacroMedia FGS	£	299
PowerTrap Security Device	from £	150

MEDIA

74 minute CD-ROMS	from £	3.50
Syquest 135 Mb EZ-Carts	from £	8
230 Mb Optical Carts	£	10

Int. Sales: +44 (0) 181 318 1424 Fax: +44 (0) 181 318 1802 Email: sales@mygate.com

Mygate

APPLE SYSTEMS

New 603e PowerMacs

This latest range of PowerMacs are based on superfast 603e CPU's ranging from 180 MHz to a staggering 275MHz (6500/275) and come with lots of free software.

Models include:

5400/180 16/2GB/28.8 /8xCD/15" disp.
5500/225 32/2GB/33.6 /12xCD/TV/vid.

6400/200 16/2.4GB/28.8 /8xCD
6500/250 32/3GB/33.6 /12xCD
6500/275 32/4GB/33.6 /12xCD/TV/vid.

Call Mygate for the latest prices on these great systems

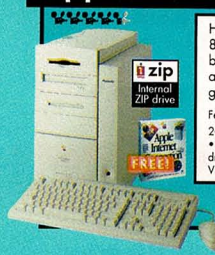
Newton MessagePad 2000

Features include:
160MHz StrongARM 110 Risc Processor • 5 Mb RAM • Builtin speaker and mic • 480 x 320 pixel backlit display with 16 greys • 2 x PCMCIA slots • Handwriting recognition

4Mb Flash Upgrade	**£ 71**
Keyboard	**£ 71**
Newton Print Pack	**£ 37**
AC Adaptor	**£ 27**

Introductory Price **£549**

Apple PowerMac 8600

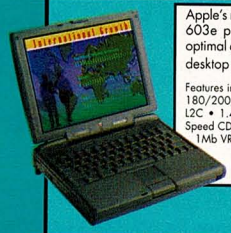


Housed in the new K2 design tower, the 8600 is a true multimedia workhorse based on a 200 MHz 604e processor and offering excellent video, audio and graphics capabilities.

Features include:
200 MHz PPC 604e CPU • 32Mb RAM • 256k L2C • 1.4Mb Floppy drive • 2GB HD • 12x CD ROM drive • Internal 100Mb Iomega ZIP drive • 2Mb VRAM • Apple keyboard • Apple Mouse & more!

only **£2199**

Apple PowerBook 3400

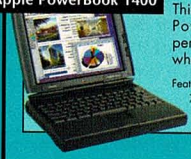


Apple's new range of PowerBooks offer the fastest 603e processors making the 3400 series the optimal choice for mobile professionals who need desktop performance.

Features include:
180/200/240 MHz 603e CPU* • 16Mb RAM • 256k L2C • 1.4Mb Floppy drive • 1.3/2/3 GB HD* • High Speed CD ROM • 12.1" Active Matrix Colour Screen • 1Mb VRAM • Expansion capabilities & more
*configurations differ between models

from **£2899**

Apple PowerBook 1400



This established range of Apple PowerBooks offers great performance for mobile users who need desktop power.

Features:117 MHz 603e CPU, 16Mb RAM, 750 Mb HD, 6 x CD ROM and more

from **£ 999**

Recommended for your PowerBook

Targus Notepac

A high quality cary case designed for use with the range of Apple PowerBooks. Features a large compartment for the computer as well as pockets for adaptors, disks, batteries etc.

from **£ 30**

Nikon CoolPix 100

This ultra slim PCMCIA digital camera plugs straight into your PowerBook allowing you to instantly shoot and download upto 42 images at a time

£ 349

Motorola 33.6 PCMCIA Card

This 33.6 kbps modem card from Motorola brings fast communications and Internet capabilities to your PowerBook.

£ 135

PowerBook RAM modules

16 Mb PowerBook 1400 Series	£	89
24 Mb PowerBook 1400 Series	£	125
16 Mb PowerBook 3400 Series	£	95
32 Mb PowerBook 3400 Series	£	169

Pace Microlin 33.6 Modem

- 33.6kbps Data transfer
- High speed Fax send/receive
- Data compression & error correction
- Fast Connect Protocol
- Software & cables included
- Free Internet trial
- BABT approved

only **£99**

Mind Your Own Business (MYOB) 6.0

MYOB 6.0 is the all in one accounting package that enables you to record and manage your business financial records.

£ 139

Insignia SoftWindows 95 4.0

Insignia's emulation software allows you to run Windows95 on your Mac. Fully networkable and with support for Mac SCSI devices SoftWindows 95 is invaluable.

£ 259

FREE News Magazines !

To compliment the Macintosh Product Guide, Mygate are proud to announce the launch of two new publications.

Be in touch... SYSTEM

SYSTEM is our new quarterly newsletter which will feature new products, hints and tips, profiles, competitions and of course our extensive price list.

Be first... modeM

modeM is a fax and e-mail update bringing up to the minute pricing, special offers and news on new products or services.

All three publications are exclusive to Mygate and can be obtained by:

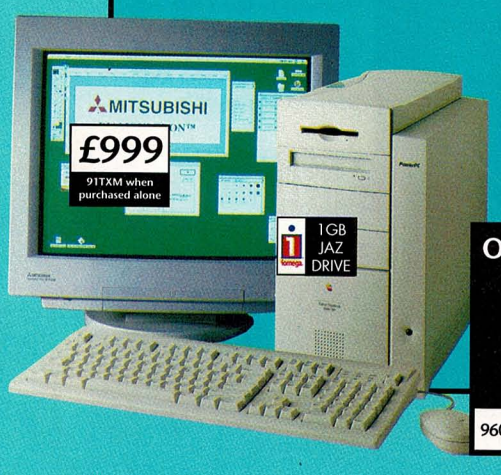
Phone: 0800 018 1424

Fax: 0181 318 1802 or

E-mail: sales@mygate.com

POWERMAC 9600/233 Bundle

The Power Macintosh 9600 is the most powerful and versatile machine that Apple produce. Housed in the K2 tower the 9600/233 is the fastest 604e Mac OS machine currently on the market. Bundled with a Mitsubishi 91TXM 21" monitor and a free 1GB external Jaz Drive, this is a truly awesome system suitable for all high end applications.



Features: 233MHz PowerPC 604e • 32Mb RAM • 4 GB HD • 4Mb IMS Card • 12x CD ROM Drive • 512k L2Cache • Mitsubishi 91 TXM 21" monitor • Apple Extended Keyboard • Mouse • Apple Internet Connection Kit & more!

Buy this bundle from Mygate and get a FREE 1GB external Jaz Drive.

Only **£3899**

9600/233 32/4GB/IMS/12xCD/L2C/KB + 21" MONITOR + JAZ DRIVE BUNDLE

All prices shown are business prices and do not include VAT. For consumer prices add VAT at 17.5%

The Mygate Service

Sales: lines are open **9am - 6pm Mon - Fri**
10am - 2pm on Saturdays
Personal callers are welcome but please call us to confirm product availability before commencing your journey.

Technical Support on 0181 318 1424 is available for products and services purchased from Mygate.

Payment for goods is with order, by cheque (payable to Mygate Ltd.) or by credit card (no surcharge applied). We also offer Transax facilities, allowing same day clearance on most company and personal cheques as well as Credit and Lease facilities subject to status. All credit cards are subject to checks for fraudulent use.
Education, government and approved corporates are welcome to purchase with official orders.

Delivery: All orders for ex-stock items received and cleared by 17.00 (weekdays) will normally be despatched the same day for delivery overnight unless specified otherwise. Delivery and packaging is charged as extra. All deliveries are by national courier (please note we do not guarantee an overnight service unless paid for as extra). Timed and same day deliveries (within the M25) are also available.

Terms & Conditions: All sales are subject to our standard terms and conditions, a copy of which is available on request. Prices and specifications are subject to change without notification. All offers are subject to availability. Pictures are used for illustration purposes only. All products, brand names and trademarks are acknowledged. E&OE.

Mygate Ltd, Units 9 & 11, Southbrook Industrial Estate, Southbrook Road, Lee, London. SE12 8LG

Apple Authorised Reseller
Apple Education Alliance Partner

Ordering Hotline 0800 018 1424

DELTA SWITCH VISA MasterCard TRANSAX

The Net directory

Why is there such a huge and bewildering variety of network software available? MACFORMAT helps you decide which programs you need and shows you why.

As the importance of networks grows, whether they're internal networks or the wide expanse of the Internet, more software publishers are getting in on the act to offer the programs they feel you can't do without. A refreshingly large amount of this software is actually free or relatively inexpensive, and not just because of the extremely active shareware programming community.

Even large firms like Microsoft, Adobe and Macromedia are giving away software simply because they want you to use it. That way, they reason, they can make a living from selling electronic publishing software to creators who want you to see their material.

Our Net directory looks at the bargains you can enjoy, as well as the software you need to get the most out of your connected Mac. You'll find an even more comprehensive version of this guide, with over 70 programs listed, on our Cover CD this issue. The guide's in the form of an HTML document, so you can view it in your favourite Web browser and use the guide's live Web links to connect to any of the home pages we've listed. (You'll need a live Internet connection to use the links.)

ON THE CD

Comprehensive Net directory with over 70 programs listed

Connection protocols

Before you get onto the Internet, you need the hardware and software to establish your connection. Your hardware will be a modem (page 70), or you may have a connection through work or college (page 34). Any good Internet Service Provider should kit you out with all the software you need, but you needn't stick with any of the software you're given if you see something in our guide that looks more useful.

Most crucial of all are the various pieces of software which make the connection with the Internet and ensure that any information you send or receive is translated correctly. A TCP program is essential: it translates your Mac's signals into the TCP/IP format the Internet operates around.

PPP (Point to Point Protocol) and SLIP (Serial Line Internet Protocol) are the programs that actually establish your connections; they both work in similar ways, but your Service Provider's account will use only one system. Don't try using a PPP program with a SLIP-based account, or SLIP with a PPP account. You won't need either system if you use a LocalTalk or Ethernet connection through a network at work or college.

FreePPP

Free from the FreePPP Group
http://www.rockstar.com/ppp.shtml

One of the most popular and efficient versions of PPP, FreePPP gives your modem a stable and reliable connection.

InterSLIP

Free from InterCon Systems
(No Web address available)

SLIP is an older and less elegant way of achieving the same task as PPP – establishing your modem connection. The maker of InterSLIP isn't developing it any further, but it remains the favourite SLIP program among the Net community.

MacIPX

Free from Novell
http://www.novell.com/intranetware/products/clients/clientmac/

Designed by network specialist Novell, IPX is a networking protocol like AppleTalk, but it's useful to have when you want to link your Mac to PCs because it works on both types of computer. MacIPX is, of course, the Mac version; any PCs in the network will need to have their own version installed. Several games written for both Mac and PC offer an IPX facility so you can link up several computers for network play. See our "30 great multi-player games" box below for more details.

Open Transport

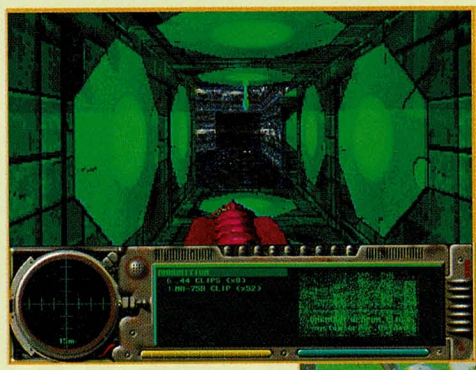
Free with System 7.5 or 7.6
http://devworld.apple.com/dev/opentransport/

Open Transport, the communications system found in every new Mac and Mac-compatible, brings together AppleTalk, TCP/IP and several other minor networking protocols into what's become a seamless whole (after a bumpy bug-ridden start).

30 great multi-player games!

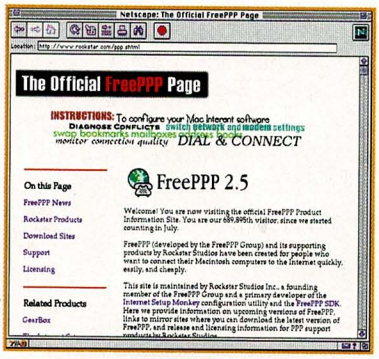
There's an astonishing selection of Mac games that you can play against human opponents. We've listed 30 suggestions here, but you'll find plenty more listed at the Networkable Mac Games Web site (http://www.AmbrosiaSW.com/netgames/), which also contains essential information for getting your networks into prime running order.

Most of the games listed here work through a conventional AppleTalk internal network, but if your Mac shares a network with other types of computer, you may also be able to link up through TCP/IP (typically reserved for Internet use, it can also work over internal networks). Some games are also ready-made for Internet play using MacIPX. You can use programs like *NetLink Remote* to coax other titles into working over the Internet, but the result is likely to be a game too slow to be playable.

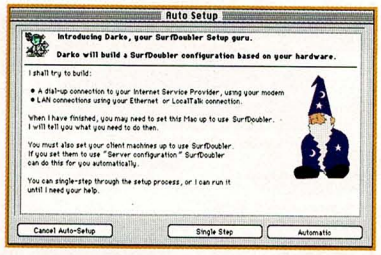


Play *Marathon* over a network and you'll get to hunt down your best friends like dogs – if they don't get you first.

***Apache Longbow* is a flight sim you can link with sister sim *HIND* for US-Russia warfare.**



The Web page for FreePPP gives you all the latest information on this excellent alternative to Apple's own PPP software.


Auto Setup
Introducing Darko, your SurfDoubler Setup guru.
Darko will build a SurfDoubler configuration based on your hardware.
I shall try to build:
• A dial-up connection to your Internet Service Provider, using your modem
• LAN connections using your Ethernet or LocalTalk connection.
When I have finished, you may need to set this Mac up to use SurfDoubler.
I will tell you what you need to do then.
You must also set your client machines up to use SurfDoubler.
If you set them to use "Server configuration", SurfDoubler
can do this for you automatically.
You can single-step through the setup process, or I can run it
until I need your help.
Cancel Auto-Setup
Single Step
Automatic

Vicom's *Surf Doubler* enables two Macs to share a single modem connection, and includes an automatic set-up routine.

■ In our Cover CD guide: *MacPPP, Open Transport PPP, Sonic PPP* and Open Transport's predecessor *MacTCP.*

Cheating the network

Every network has its limitations. How do you link to an established company network while you're working from home, for example? And how do you play games over the Internet if there's no Net feature built in? Luckily, there are plenty of programs that can overcome seemingly insurmountable problems.

Apple Remote Access

From £58; from Computers Unlimited on 0181 357 5857
http://www.unlimited.com/

Apple's ingenious piece of software enables you to link up to another Mac through AppleTalk even if you're not in the same room or building. Instead, you can link to it through a modem, thus enabling you to enjoy file sharing and other features.

The Mac you connect to needs to have either of the server versions of *ARA* installed; the single-connection version costs £175, while a version which accepts 16 simultaneous connections costs £939. The client version of *ARA*, which gives you access to the server, costs £58.

NetLink Remote

Shareware
http://users.deltanet.com/users/axly/

A high-speed modem protocol, Joe Kloss's program is designed specifically to handle the constant flow of information that Internet games require. It's the best chance you have of getting demanding games working over the Internet.

SurfDoubler

£116 from A M Micro on 01392 426473
http://www.vicomtech.com/surfdoubler/surf.main.html

If you have two Macs but only one Internet account, you can use *SurfDoubler* to get both Macs on the Net. Use LocalTalk or Ethernet to link up your Macs, and *SurfDoubler* will enable you to use Web browsers, e-mail and so on through whichever of the two Macs has a modem connected to access the Net.

TCPSerial

Freeware

In many ways the ideal partner for NetLink Remote, *TCPSerial* enables your Mac to send AppleTalk signals through a modem connection, making it possible to play games like *Marathon*, which was designed purely for AppleTalk network playing, over the Internet.

■ In our Cover CD guide: *IPRemote, IPTnnl* and *Vicom Internet Gateway*.

Game	AppleTalk	TCP/IP	MacIPX
A-10 Attack! Outpost Cuba	2-8 players	–	–
Abuse	2-8 players	–	–
Apache Longbow	2-8 players	–	2-8 players
Avara	2-6 players	2-6 players	–
Bolo	2-16 players	2-16 players	–
Close Combat	–	2 players	–
Command & Conquer	–	2-4 players	2-4 players
Damage Inc	2-8 players	–	–
Descent	2-8 players	–	2-8 players
Descent II	2-8 players	–	2-8 players
Doom II	2-4 players	–	2-4 players
Duke Nukem 3D	2-8 players	2 players	2-8 players
F/A-18 Hornet 3.0	2-4 players	–	–
Hexen	2-8 players	–	2-8 players
IndyCar Racing II	2 players	–	–
Mah Jong Parlour	2-4 players	2-4 players	–
Marathon	2-8 players	–	–
Marathon 2	2-8 players	–	–
Marathon Infinity	2-8 players	–	–
MechWarrior 2 with NetMech	2-8 players	2-8 players	2-8 players
Nascar Racing	2 players	–	–
Prime Target	2-8 players	–	–
Spaceward Ho!	2-20 players	–	–
Terminal Velocity	2-8 players	–	–
Virtual Pool	2 players	–	–
WarCraft	2 players	–	2 players
WarCraft II	2-8 players	2-8 players	2-8 players
Weekend Warrior	2-6 players	–	–
Worms	–	–	2-4 players
ZPC	2-8 players	–	–

Web browsers

Your Web browser is probably at the heart of your Internet software suite, as it's likely to be the program where you spend the most time. It's also the most flexible piece of Net software you'll own: a modern browser offers not only the ability to display Web pages, but also to show newsgroup areas and send and receive e-mails (see these respective categories for more details).

The ability to show Web pages, though, remains the most vital feature of your browser. Every Web page is based on a format called HyperText Markup Language (HTML), which Web browsers are able to interpret to display the text and images you'll see on screen.

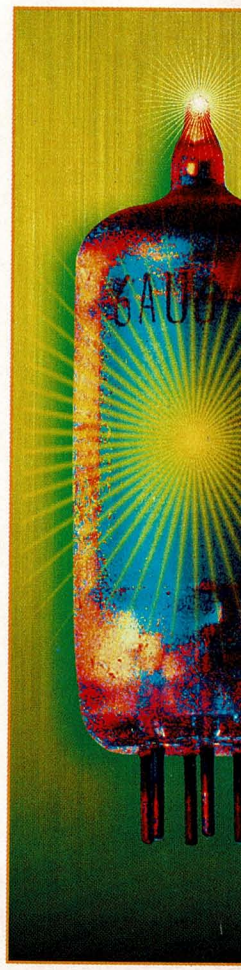
The World Wide Web Consortium has defined an official format for HTML to enable every browser to show every page on the Web, but real life isn't like that; so the most-used browsers are those which can show the additional formats devised by Netscape, the firm behind the most popular browser.

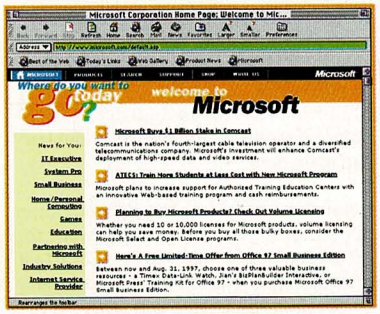
The Web itself is the Internet's equivalent of a magazine stand, with thousands of publications available. It's just that unlike magazines, these publications can show up-to-the-minute news and display video and animation. Few such publications have the depth and legibility of the best magazines, although the two media are existing happily side by side – yet another prediction for the death of paper gone awry.

Internet Explorer

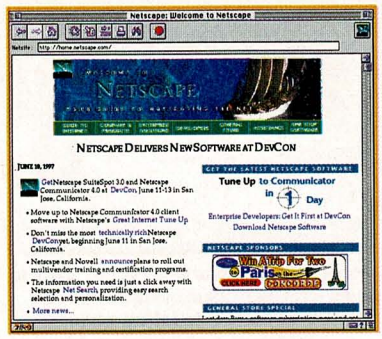
Free from Microsoft
http://www.microsoft.com/ie/

Internet Explorer is Microsoft's attempt to match the *Netscape* juggernaut that's gathering steam as more people join ➤




Microsoft Corporation Home Page: Welcome to Mic...
Where do you want to go today?
welcome to Microsoft
Microsoft Buys $1 Billion Stake in Comcast
ATECS: Train More Students at Less Cost with New Microsoft Program
Planning to Buy Microsoft Products? Check Out Volume Licensing
Here's A Free Limited-Time Offer from Office 97 Small Business Edition

Microsoft's *Internet Explorer* seems to have fans and detractors in equal measure, often just because of the company that makes it.


Netscape: Welcome to Netscape
NETSCAPE DELIVERS NEW SOFTWARE AT DEVCON
Tune Up to Communicator in a Day
Win A Trip For Two to Paris
CONSIDERED

Still the world's most popular browser, *Netscape Navigator* has led the way in bringing multimedia to the Web.

Netscape: lat_fp.pdf
Los Angeles Times
Does God's Hand Write in Code?
Gen. Ralston Drops Joint Chiefs Bid After Adultery Flap
Economists See Rosy Long-Term U.S. Future

***Acrobat Reader* brings the richness of print design to the Web page, integrating its controls within *Netscape's*.**

the Net community, and it has found a devoted following, leading to an energetic "Which is better?" debate among Net users.

As the name suggests, the *Internet Explorer* suite gives you a full range of tools: the *Explorer* browser takes care of the Web and FTP, while *Internet Mail and News* handles the chat-oriented services of e-mail and newsgroups.

Netscape Navigator

Netscape
http://home.netscape.com/comprod/products/navigator/version_3.0/index.html

The world's most-used Web browser, *Netscape Navigator* offers a full set of Internet features. It downloads Web pages quickly and efficiently, interpreting all the enhanced HTML Netscape itself devised. You can also see FTP sites, newsgroups and even gopher sites with the browser, making *Navigator* an all-purpose tool. The program also includes an e-mail facility.

Netscape is now using *Navigator's* popularity as the launchpad for a more expansive vision of Internet software that it calls *Communicator*. See "What's New" on page 26 for more details.

■ In our Cover CD guide: *AOL*, *CompuServe* and *Cyberdog*.

Web browser plug-ins

HTML is well established as the Web's universal format, enabling any browser to display Web pages. It's limited, though, offering little control over typography in particular. The challenge facing the Internet industry now is how to extend the Web's capabilities without leaving behind the millions who use HTML browsers every day.

Netscape's answer was to build a plug-in feature into its *Navigator* browser, enabling you to extend its abilities by downloading small sub-programs, each designed for a specific task. The previous option – attaching helper programs to co-operate with your browser – remains and is most used with software (like *StuffIt Expander*, for example) to decompress files after you have downloaded them.

Most plug-ins are designed to display a specific multimedia format, whether that's QuickTime video or Adobe's Portable Document Format, which bypasses HTML to display pages using different fonts.

Practically every plug-in available is free. The idea is to encourage you to enjoy different experiences through the Web, and to persuade Web designers that there's such a huge demand for a particular format that they should invest in

Apple's experimental plug-in *HotSauce* enables you to view 3D maps of Web sites, zooming into the area you want.

software to design work using the system. Microsoft's *Internet Explorer* is also able to use *Netscape* plug-ins and has its own plug-in standard to boot, although there are far fewer of these available.

If you plan to use plug-ins, make sure you allocate more memory space to your Web browser. Click once on the main browser program's icon to highlight it, then select **Get Info** from the **File** menu and add 1,000K to the program's preferred size.

Keys to plug-ins

CD: works with *Cyberdog*
IE: works with *Internet Explorer*
NN: works with *Netscape*

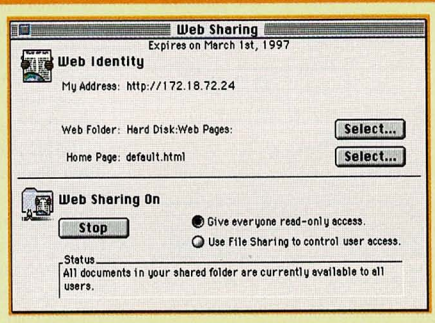
Personal Web sharing

One of the many inventive features lined up to debut with the forthcoming Mac OS 8, Personal Web Sharing (PWS) brings the Intranet to any group.

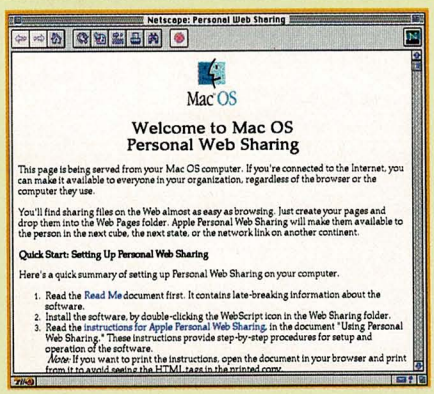
An Intranet uses the formats of the Internet, such as the Web and e-mail, within an internal network. For example, your company could create training documents that anyone could view over your network using a Web browser. PWS sets up the network connections that you need to share an Intranet and helps you place material in the right location to be read by others.

Unlike the Internet, though, you don't even have to learn the Web's HTML format to create your material. You can place your everyday word processing or spreadsheet documents in a Web Pages folder, where up to 16 people at once can view them through their Intranet browsers. Of course, you can also use PWS to set up a sophisticated Web environment using HTML authoring tools.

Look out for more details on Mac OS 8 developments and Personal Web Sharing in future issues of MACFORMAT.

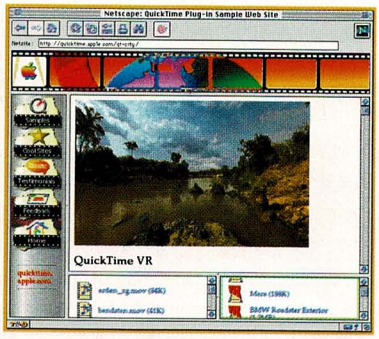


Apple's Personal Web Sharing system in Mac OS 8 will make setting up your own Intranet Web server as easy as using File Sharing.


Netscape: Personal Web Sharing
Mac OS
Welcome to Mac OS
Personal Web Sharing
This page is being served from your Mac OS computer. If you're connected to the Internet, you can make it available to everyone in your organization, regardless of the browser or the computer they use.
You'll find sharing files on the Web almost as easy as browsing. Just create your pages and drop them into the Web Pages folder. Apple Personal Web Sharing will make them available to the person in the next cube, the next state, or the network link on another continent.
Quick Start: Setting Up Personal Web Sharing
Here's a quick summary of setting up Personal Web Sharing on your computer.
1. Read the Read Me document first. It contains late-breaking information about the software.
2. Install the software, by double-clicking the WebScript icon in the Web Sharing folder.
3. Read the Instructions for Apple Personal Web Sharing, in the document "Using Personal Web Sharing." These instructions provide step-by-step procedures for setup and operation of the software.
Note: If you want to print the instructions, open the document in your browser and print

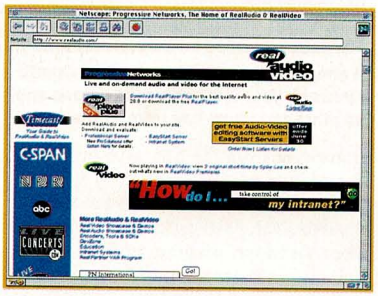
Other Mac users in your network can use their browsers to read Web pages you've published, but PWS can also convert plain text documents into HTML for you if you don't know how to make your own Web pages.

***MacZilla's* home page welcomes you to this all-purpose multimedia display plug-in for your Web browser.**



The *QuickTime Plug-in* now comes with every copy of *Netscape*, enabling anyone to enjoy video and virtual reality scenes.

***Sizzler* is an efficient way to produce and display high-quality animation sequences on your Web page – an excellent alternative to standard GIF animation.**



One of the most popular plug-ins around, *RealAudio* plays streams of sound through your browser.

Acrobat Reader

CD, IE, NN
Free from Adobe
http://www.adobe.com/prodindex/acrobat/main.html

Acrobat Reader enables you to view any document designed in the Portable Document Format (PDF), which exceeds the limitations of HTML to use any combination of fonts and type sizes in its pages.

Crescendo

NN
Shareware from LiveUpdate
http://www.liveupdate.com/crescendo.html

Crescendo enables your browser to play MIDI (Musical Instrument Digital Interface) files made by musicians around the world – normally you'd need a sequencer or other type of music program.

HotSauce

CD, IE, NN
Free from Apple
http://hotsauce.apple.com/

The nature of Web browsing makes it feel like a two-dimensional experience – always moving across from page to page, never digging deeper. *HotSauce* uses Apple's Meta Content Format to give you a 3D view of the Web, enabling you to delve into sites' folders as if you were negotiating an asteroid field in space.

Live3D

IE, NN
Free from Netscape
http://home.netscape.com/comprod/products/navigator/live3d/

This ambitious PowerMac-only plug-in enables you to enter 3D environments. The idea is to create interactive 3D games, chat rooms where you can see 3D representations of the other guests and more, but the slow connections that most people are using limit the technology severely. One for the future?

MacZilla

IE, NN
Shareware from Knowledge Engineering
http://www.maczilla.com/

A multimedia all-rounder, *MacZilla* enables the playback of QuickTime and MPEG movies as well as the AVI video format, plus MIDI files and the sound formats AU, AIFF, WAV and MP2.

MIDIPlugin

NN
Freeware
http://www.planete.net/~amasson/midiplugin.html

As you'll have guessed from the name, Arnaud Masson's plug-in can play MIDI music files, but that's only its least exciting feature. *MIDIPlugin* is the ultimate in Web interactivity – a karaoke player! Now your friends and you can gather round your Mac to sing along to "Hotel California" and other rocktastic smashes through *Netscape*.

PNG Live

IE, NN
Free from Siegel & Gale
http://codelab.siegelgale.com/solutions/png_index.html

Will PNG produce the Web images we deserve? The World Wide Web Consortium is working with commercial companies to develop the new file format, which should become as universal as GIF is now but offer more colour and smaller file sizes.

Designers should appreciate PNG's alpha channels, which will enable them to create sophisticated imagery more easily. For the moment, though, you'll need this plug-in to assess how effective PNG promises to be.

QuickTime Plug-in 1.1

CD, IE, NN
Free from Apple
http://quicktime.apple.com/

Perhaps the ultimate in multimedia players for the Web, Apple's QuickTime plug-in comes with every copy of *Netscape Navigator 3.0*, but it will work in other browsers. The plug-in enables you to see QuickTime movies and QuickTime VR environments within a Web page, as well as other video and sound formats.

RealAudio 3.0

NN
Free from Progressive Networks
http://www.realaudio.com/

One of the most ubiquitous of proprietary players (systems that can play only one specific file format devised by a private company), *RealAudio* brings the immediacy of radio to the Web. You can download live or recorded audio to listen to, and the sound is streamed onto your Mac, which means it downloads continuously in the background, ready to be processed by the software to give a smooth playback. Most new video and audio plug-ins use a similar principle, including the forthcoming *RealPlayer*, which will add video playback capabilities.

Shockwave 13

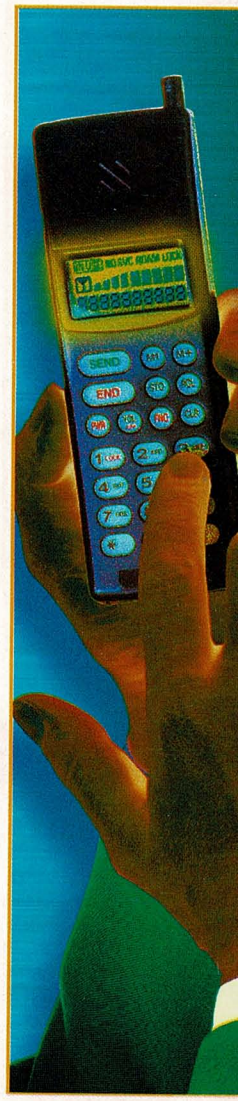
CD, IE, NN
Free from Macromedia
http://www.macromedia.com/shockwave/

One of the best-established specialised formats on the Web, *Shockwave* is a multifaceted format that's able to display several different types of interactive media. Each is based on a design program from the Macromedia stable: *Shockwave* for *Director*, for example, enables you to view and use interactive multimedia productions and games, while *Shockwave* for *FreeHand* presents maps and diagrams that you can zoom in and out of.

Sizzler 1.0.1

CD, IE, NN
Free from Totally Hip
http://www.totallyhip.com/

Most of the animation you'll see on the Web will be based on the GIF image format, but you can't make very large animations with this without them taking a long time to download. While you can't see animations in the ➤



Sizzler format without this plug-in, you should enjoy a better production quality.

Whurlplug 1.0

NN
Free from Apple
http://quickdraw3d.apple.com/Whurlplug.HTML

Based on Apple's QuickDraw 3D graphics system, *Whurlplug* enables your Power-Mac to display 3D models within a Web page. You can even click on them to move them round on-screen.

■ In our Cover CD guide: *Envoy, Fractal Viewer, ichat, InterVU, Look@Me, RealSpace Viewer, Speech Plug-in, Talker, VivoActive Player, Vosaic* and *VRML Equinox.*

E-mail

While the Web is capturing the public imagination, e-mail remains the Internet's most-used facility. You simply use e-mail to send and receive written messages – you can also attach files like images or sound files, as long as you keep them down to a reasonable size (less than 800K to be safe). We've missed out the three most significant e-mail programs – *Claris Em@iler, Eudora Pro* and *QuickMail Pro* – because you can read our in-depth test of all three on page 80.

Eudora Light

Free from Qualcomm
http://www.eudora.com/eudoralight/

An established favourite, *Eudora* is the the most widely-used e-mail program in the world, with an estimated 18 million people using either this free version or

The free *QuickMail Express* is the newest rival to the enduringly popular *Eudora Light* e-mail package.

the commercial *Eudora Pro. Eudora Light* gives you all the basic features you need to send and receive e-mails and attachments. See page 80 to find if it's worth upgrading to *Eudora Pro.*

QuickMail Express

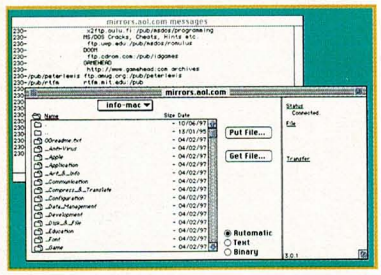
Free from CE Software
http://www.cesoft.com/quickmail/qmexpress/

A stripped-down free version of *QuickMail Pro* (see page 80).

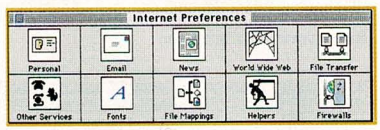
■ In our Cover CD guide: *EmailMerge, Internet Mail and News, Mailstrom* and *Notify Mail.*

FTP

The Internet's File Transfer Protocol gives you access to software stored on servers across the Net, although with 600Mb of top software on every MACFORMAT Cover CD, including updaters and the latest



Netscape* and *Explorer* can do FTP for you, but those in the know insist on the reliability of FTP programs like *Fetch.



A simple but useful idea, *Internet Config* stores all your Net addresses on one spot so other programs can refer to them.

shareware from the Net, save yourself the on-line time!

You can use FTP through a Web browser like *Netscape* to get hold of material like shareware, program updates and demos, but there are more efficient alternatives around.

Fetch

Shareware
http://www.dartmouth.edu/pages/softdev/fetch.html

Fetch is a member of the Internet establishment, a favourite of many people for downloading software over FTP. You can also use it for uploading – placing software onto a site for others to access.

Fetch is easy to use and particularly

Getting pushy: the Web channel boom

How would you like the information you need the most from the Net to come straight to you, instead of you having to go and find it? The new breed of "push channels" is bringing broadcasting to the Web: you can choose from hundreds of channels covering business and leisure topics, and then receive only the information sent by those channels, using software offered by the firms which co-ordinate the channels.

Push software is usually free. After you've downloaded a program, it will work invisibly whenever you open your Net connection, gathering any new material from the channels that you've subscribed to. You can then read or watch it (there are video channels as well as text) at your convenience, even after you've disconnected.

There's a choice of push providers, each of whom has its own software and selection of channels. You'd expect to find a lot of computer news channels, but there's more to push than industry gossip. Here are three services to get you started:

BackWeb

http://www.backweb.com/

Over 40 channels (direct from the US and Europe) include American Singles, Astrology

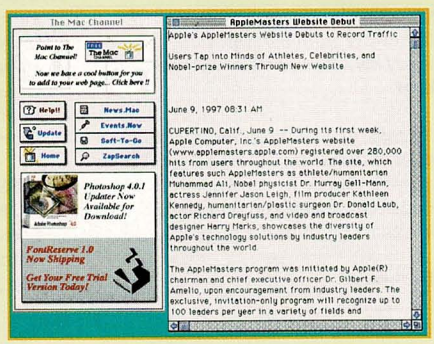
***BackWeb* is foremost among the new wave of push programs, which bring you the news you want when you subscribe to dozens of channels.**

Net, House of Blues and computing and business services. The Mac version of the software is not quite finished, but there's an early version to try out.

The Mac Channel

http://www.macchannel.com/

Available only as a preview version at the moment, this single-channel provider intends


The Mac Channel
AppleMasters Website Debut
Apple's AppleMasters Website Debuts to Record Traffic
Users Tap into Minds of Athletes, Celebrities, and Nobel-prize Winners Through New Website
June 9, 1997 08:31 AM
CUPERTINO, Calif., June 9 -- During its first week, Apple Computer, Inc.'s AppleMasters website (www.applemasters.apple.com) registered over 280,000 hits from users throughout the world. The site, which features such AppleMasters as athlete/humanitarian Muhammad Ali, Nobel physicist Dr. Murray Gell-Mann, actress Jennifer Jason Leigh, film producer Kathleen Kennedy, humanitarian/plastic surgeon Dr. Donald Laub, actor Richard Dreyfuss, and video and broadcast designer Harry Marks, showcases the diversity of Apple's technology solutions by industry leaders throughout the world.
The AppleMasters program was initiated by Apple(R) chairman and chief executive officer Dr. Gilbert F. Amelio, upon encouragement from industry leaders. The exclusive, invitation-only program will recognize up to 100 leaders per year in a variety of fields and

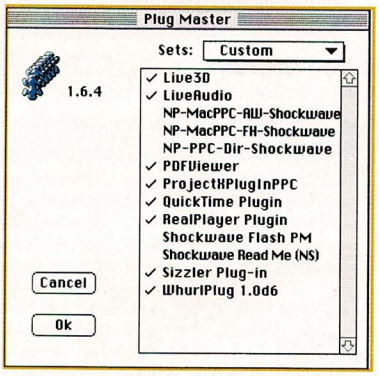
Not quite finished but available to try now, *The Mac Channel* sends you daily news updates about Mac hardware and software.

to send you up-to-date news and briefings on the Mac scene, with sources including Apple, Power Computing, Motorola and the Reuters and Business Wire press bureaux.

PointCast

http://www.pointcast.com/

This US-based service offers 25 channels including *The New York Times, The Boston Globe* and sports, lifestyle and health programming.



If you've got clashing plug-ins, *Plug Master* can help you manage which ones you've got switched on.

useful for transferring groups of files at the same time.

NetFinder

Shareware
http://www.ozemail.com.au/~pli/netfinder/

NetFinder avoids one of the biggest drawbacks of FTP – the way you have to restart downloading from scratch if there's a problem with your connection or with your Mac.

■ In our Cover CD guide: *Anarchie.*

Newsgroups

Also known as Usenet, the newsgroup area is the liveliest and most controversial area on the Internet. It brings together thousands of discussion groups on every subject you can imagine, including the Mac itself.

Usenet is notorious for its adult groups, where illicit material is exchanged on a regular basis. If you're concerned about your children getting access to these, it's easy to find an Internet Service Provider that does not offer such groups on its own servers.

Some groups are poorly moderated as well, so you can waste time reading a lot of junk material. Find a good group, though, and Usenet will become invaluable for making new contacts, enjoying the cut and thrust of a good debate and finding out useful information.

NewsHopper 1.2

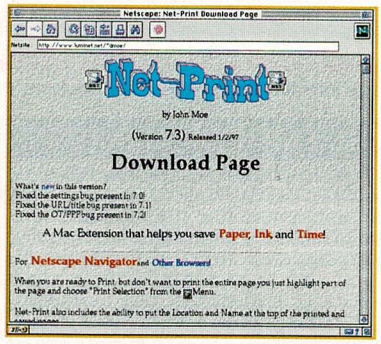
£46 from SW15 Software
on 0171 636 6809
http://www.demon.co.uk/sw15/

NewsHopper enables you to read newsgroups off-line – in other words, you can connect to a newsgroup, download any new messages and close the connection before reading them, saving a lot of expense on the phone bill.

NewsWatcher

Freeware
http://charlotte.acns.nwu.edu/jln/progs.html

The most popular Usenet newsreader for the Mac, *NewsWatcher* comes from John


Netscape: Net-Print Download Page
Net-Print
by John Moe
(Version 7.3) Released 1/2/97
Download Page
A Mac Extension that helps you save Paper, Ink, and Time!
For Netscape Navigator and Other Browsers

If you print out a lot of Web pages, *Net-Print* can save paper by enabling you to choose which part of the page to print.

Norstad, who's also produced the excellent virus detector *Disinfectant*. A program with an elegant and simple interface, *NewsWatcher* is now public domain, which means other programmers have been free to adapt the program code to improve on the way Norstad left it.

We look at these adaptations in our extended Cover CD Net guide.

■ In our Cover CD guide: *Internet Mail and News, MacSoup* and a fine pair of *NewsWatcher* variations.

Net utilities

If you start using the Internet heavily, you'll soon be grateful for some handy utilities to help you make your Net use more efficient.

CyberFinder

£29.99 from Softline on 0181 401 1234
http://www.aladdinsys.com/cyberfinder/index.html

Many Internet programs (such as *Netscape* for the Web and *Fetch* for FTP) enable you to save the locations of your favourite sites. *CyberFinder* goes one better: you can use this Aladdin utility to list all your most-visited locations, bringing the Web, FTP and e-mail together into one list you can arrange as you please into folders – much like you'd arrange files in the **Finder.**

Internet Config 1.3

Freeware
http://www.share.com/peterlewis/ic/index.html

You will have to enter in the complex details of your Internet addresses every time you use a new Internet program for the first time – unless you get *Internet Config*. This invaluable program retains all the details you enter into it, and communicates these to any program you install that is designed to recognise the utility. The list includes *NewsWatcher, Claris Em@iler, Fetch, CyberFinder* and many, many more.

Navigator Button Editor 1.2

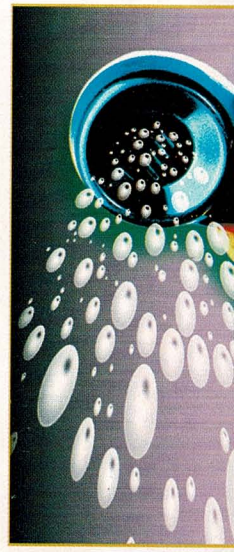
Shareware
http://loki.ups.edu/skylar/wares/index.html

Netscape's **Directory Buttons** option gives you six instant-access buttons to Web sites that the Netscape firm has chosen as the most useful for your needs. If you would prefer to make your own choices, Skylar Stein's *Button Editor* enables you to edit the labels and destinations for these buttons.

Net-Print 7.3

Freeware
http://www.luminet.net/~dmoe/

Now you can save paper whenever you print out a Web page. This utility enables you simply to highlight a selection of text on any Web page and then print out only that material.



Plug Master

Shareware from TaDPoL Software
http://www.tc.umn.edu/nlhome/g019/tils0007/tadpol/

If you like using many plug-ins but your Mac only has limited memory, *Plug Master* enables you to pick which plug-ins your copy of *Internet Explorer* or *Netscape* loads before you run it, thus saving valuable RAM. The principle is a lot like System 7.5 and 7.6's **Extension Manager**, which helps you manage your System Folder.

WebArranger

£81 from Computers Unlimited
on 0181 357 5857
http://www.cesoft.com/webarranger/webarrangerpage.html

This add-on for *Netscape Navigator* manages your use of the popular Web browser, enabling you to compile groups of every Web, FTP or news site that you have ever visited. *WebArranger's URL-Agent* monitors your favourite pages, keeping you up to date with any changes that have occurred.

WebFree

Shareware

If you're tired of waiting for a Web page to download because of the animated adverts at the top, you can use *WebFree* to control *Netscape* so no adverts appear. You might also screen out images or unwanted links, for example. See "Shareware Central" on page 116 for more details.

WebWhacker

£59 from ForeFront on 0181 387 4014
http://www.ffg.com/whacker/

If you want to study a Web site at length but don't want to pay for the on-line time, *WebWhacker* enables you to download all the material for a Web page, or even an entire site, onto your hard drive. From there, you can browse at your leisure, to your heart's content.

■ In our Cover CD guide: *IPMonitor, IP NetMonitor, MacTCP Monitor, MacTCP Switcher* and how to place the NetBots at your command... **MF**

MacLine

MILL HOUSE • MILL LANE • CARSHALTON • SURREY • SM5 2WZ

SALES HOTLINE 0181 401 1111

FAX: 0181 401 1112

PHONE NOW FOR A LIST OF SALE ITEMS, SPECIAL OFFERS AND LIMITED STOCK - UPDATED DAILY

SPECIAL OFFER! Get these ten fantastic Electronic Arts CDs for only £29.00 plus VAT when you buy a computer. **SPECIAL OFFER!**

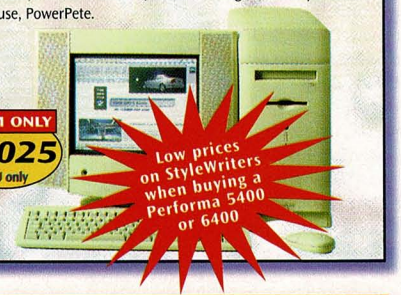
Chuck Yeager's Air Combat, Eagle Eye Mysteries in London, Around the World in 80 Days, The Labyrinth of Time, Populous II, PowerMonger, Syndicate, PGA Tour Golf II, PowerPoker, Theme Park

MacLine BRITAIN'S FAVOURITE MACINTOSH MAIL ORDER COMPANY

THE APPLE HOME OFFICE

HARDWARE - PowerPC 603e running at 200 or 250MHz, 32k internal cache, integrated FPU, 64-bit memory bus, optional 256K level 2 cache, 16Mb RAM expandable to 136Mb, Internal 2.4, or 3Gb IDE Drive, 1.4Mb, 8x CD ROM, resolution up to 1024 by 768, 16 bit colour up to 800 by 600, optional 28.8Kbps or 33.6kbps built in modem software included, 16 bit sound, stereo speakers, microphone, 2 x 7inch PCI slot, SCSI, 5.25 inch internal SCSI expansion bay.

SOFTWARE - Mac OS 7.5.3, Best of European Soccer, Apple Telecom 3.0, Ultimate Human Body, Apple Video Player, Aladdin Activity Centre, Lion King Story Book, Acrobat Reader, Toy Story Preview, At Ease, Grolier MultiMedia Encyclopaedia, ClarisWorks4.0, Claris Impact, Claris Organiser, Internet Connection Kit, MacLink Plus, Full Throttle, HyperCard Player, Descent, Performa Clickart, Thinkin' Things 3, Sammy's Science House, PowerPete.



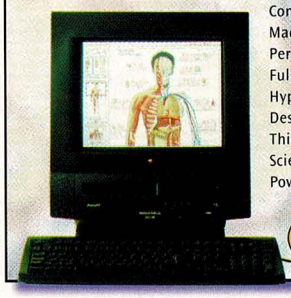
FROM ONLY **£1025** CPU only

Low prices on StyleWriters when buying a Performa 5400 or 6400

THE FAMILY MACINTOSH

HARDWARE - PowerPC 603e running at 180 or 225MHz, 32k internal cache, integrated FPU, 64-bit memory bus, optional 256K level 2 cache, 16Mb or 32Mb RAM expandable to 136Mb, Internal 1.6Gb or 2.4Gb IDE Drive, 8x or 12x CD ROM, 15" RGB monitor built in, resolution up to 1024 by 768, 16 bit colour up to 800 by 600, 28.8Kbps or 33.6kbps built-in modem & fax s/ware included, 16 bit sound, stereo speakers, built-in microphone, Video in & TV tuner, 1x7inch PCI slot.

SOFTWARE - Mac OS 7.5.3, The Best of European Soccer, Apple Telecom 3.0, The Ultimate Human Body, Apple Video Player, Aladdin Activity Centre, 120 Letters, Lion King Story Book, Acrobat Reader, Toy Story Preview, At Ease, Grolier MultiMedia Encyclopaedia, ClarisWorks4.0, Internet Connection Kit, MacLink Plus, Performa Clickart, Full Throttle, HyperCard Player, Descent, Thinkin' Things 3, Sammy's Science House, PowerPete.



FROM ONLY **£1049**

THE APPLE CREATIVE STUDIO

HARDWARE - PowerPC 603e at 275MHz, 32k internal cache, FPU, 64-bit memory bus, 256K level 2 cache, 32Mb RAM up to 136Mb, Internal 4Gb IDE Drive, 1.4Mb, 12x CD ROM, resolution up to 1024 by 768, 16 bit colour up to 800 by 600, Kbps built in modem software included, 16 bit sound, stereo speakers, microphone, 2 x 7inch PCI slot, SCSI, 5.25 inch internal SCSI expansion bay.

SOFTWARE - Mac OS 7.5.3, Avid Cinema, Adobe Photodeluxe, PowerGoo, Cubasis AV, Adobe PageMill, Dabbler, Best of European Soccer, Apple Telecom 3.0, Apple Video Player, Acrobat Reader, At Ease, Grolier MultiMedia Encyclopaedia, ClarisWorks4.0, Claris Impact, Claris Organiser, Internet Connection Kit, MacLink Plus, HyperCard Player, Performa Clickart plus 8 best selling leisure and education titles.

FROM ONLY **£1945** or £21 per week

4400/200 16/1.2Gb/CD

ONLY **£899** CPU only

ONLY **£1099** with 15" monitor

Now running at a Screaming 200MHz!!

- PowerPC 603e at 200 MHz
- Integrated FPU,
- 32K cache
- 16MB of RAM, expandable to 160MB
- Optional 256K level 2 cache
- 1.2GB IDE hard disk
- 8-speed CD-ROM
- Three PCI expansion slots
- AppleTalk
- Support for display resolutions of up to 1,152 by 1870 pixels at 8 bit colour, 16-bit color up to 832 by 624 pixel resolution.
- Available CPU only or with Apple 15" MultiScan

9600/200MP 32/4Gb/CD/Cache

• Two PowerPC 604e processors at 200 MHz •Integrated FPU, 64K cache • Accelerated graphics card •32MB of RAM, expandable to 768MB •512K level 2 cache •4GB SCSI hard disk •12-speed CD-ROM •Six PCI expansion slots •Ethernet •Composite and S-video video input and output •Support for Speech Recognition and text-to-speech capabilities•2MB of VRAM, expandable to 4MB •Support for display resolutions of up to 1,280 by 1,024 pixels •24-bit color up to 1,152- by 870-pixel resolution •Refresh rate of up to 75 Hz

from **£3199** CPU only or £34 per week

APPLE MONITORS

20" Multiscan **£1195**

15" Multiscan **£299**

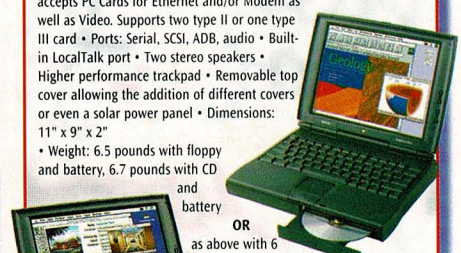
AV 1710 **£525**

POWERBOOK 1400cs

• PowerPC 603e 117MHz processor • 12Mb RAM expandable to 64Mb • 750Mb Internal drive • 11.3" dual scan colour screen • 800 x 600 SVGA, 1Mb VRAM • Will accept third party Level 2 cache • Batteries: Nimh with support for Lithium Ion, 3-5 hours average life • Expansion bay accepts CD ROM, Magneto Optical or Hard Drives • Expansion slot accepts PC Cards for Ethernet and/or Modem as well as Video. Supports two type II or one type III card • Ports: Serial, SCSI, ADB, audio • Built-in LocalTalk port • Two stereo speakers • Higher performance trackpad • Removable top cover allowing the addition of different covers or even a solar power panel • Dimensions: 11" x 9" x 2"

• Weight: 6.5 pounds with floppy and battery, 6.7 pounds with CD and battery

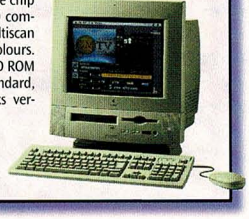
OR as above with 6 x CD ROM drive and 16Mb RAM and StyleWriter 2200



FROM **£1045** or £12 per week

5260 12/800/CD

Based around a Power PC 603e chip running at 100MHz, the 5260 combines the CPU and a 15" multiscan monitor supporting 32,000 colours. It has a built-in quad speed CD ROM drive, 12Mb of RAM as standard, and includes free ClarisWorks version 3.0.



ONLY **£775**

COLOUR STYLEWRITER 2500

This top selling StyleWriter offers 720- by 360-dpi resolution for both color and black and easily prints high-quality text and images at 5 pages per minute for black and white and up to 0.66 page per minute colour.

£225

POWERBOOK 3400 series

The Apple PowerBook 3400 series takes Apple's most acclaimed feature-ease of use - and combines it with desktop-level performance, state of the art multimedia, and quick and easy communications capabilities. These systems are the optimal choice for mobile professionals who want access to top of the line notebook computer technology

FROM **£2775** or £30 per week FREE SOFTWARE

- 180, 200 or 240 MHz PowerPC 603e processor
- 256k level 2 cache
- 750Mb Internal drive
- 12.1" active matrix SVGA display supporting thousands of colours
- Provides built-in Ethernet and modem (most configurations)
- Batteries: lithium ion
- Internal CD ROM Drive (12 speed in the 240MHz model)
- Expansion bay accepts CD ROM, Magneto Optical or Hard Drives
- Expansion slot accepts PC Cards for Ethernet and/or Modem as well as Video. Supports two type II or one type III card
- Ports: Serial, SCSI, ADB, audio
- Features 16 bit stereo sound input output ports and integrated microphone
- Higher performance trackpad

LASERWRITER 4/600

4 PAGES PER MINUTE AND 600DPI

The Apple LaserWriter 4/600PS is ideal for the individual home, education and small business users, and it's capable of integrating into offices that have Ethernet. Being Energy Star compliant, the printer works without an on/off switch and instead 'wakes up' when required, consuming less than 10 watts of power when asleep.

ONLY **£575**

6320 12/1.2Gb/CD

Based around a Power PC 603e chip running at 120MHz, the 6320 supports a 14" or 15" multiscan monitor and has a built-in quad speed CD ROM drive. It has 12Mb of RAM as standard, 256k Cache, and includes completely free ClarisWorks version 3.0 and massive software bundle.

ONLY **£725** CPU only or £8 per week

Authorised Service Provider

All warranty and non-warranty repairs

call 0181 401 1116

CALL 0181 401 1111 FOR A FREE COPY OF OUR CATALOGUE

7300 16/1.2Gb/CD/Cache

166MHz
£1575
CPU only
or £18 per week

- PowerPC 604e at 180 or 200 MHz
- Integrated FPU and 64K cache
- 16MB RAM, expandable to 512MB
- 256K level 2 cache
- 1.2GB SCSI hard disk
- 12 speed CD-ROM
- Three PCI expansion slots

200MHz
£1849
CPU only
or £22 per week

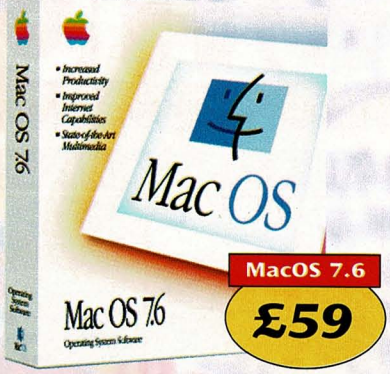
166MHz
£2045
or £23 pw with Apple 1710 monitor

- Internal 3.5-inch expansion bay
- Real-time video playthrough of up to 768 by 576 pixels
- 2MB of VRAM, expandable to 4MB
- Fast 64-bit data path to VRAM
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color up to 1,152- by 870-pixel
- Refresh rate of up to 75 Hz
- 16bit stereo audio input and output
- 64bit VRAM subsystem
- Includes 10BASE-T and AAUI Ethernet con nectors
- Supports Open Transport

The new Apple Macintosh 7300 series combines affordability, high performance and upgradeability to provide an ideal system for small and medium sized businesses, for home offices and for running productivity or multimedia applications in organisations of any size.

INCLUDES FREE MICROSOFT OFFICE!!!

UPGRADE NOW! MAC OS 7.6



MacOS 7.6
£59

Mac OS 7.6 is the first release in Apple's new strategy of delivering state-of-the-art operating system functionality on a regular basis. This release unites many new Apple technologies with additional features and functionality, to offer pervasive Internet access, improved productivity, state-of-the-art multimedia and enhanced PC compatibility. Specifically, Mac OS 7.6 integrates the Internet more fully into your desktop and documents, provides new ways to work better and faster, enables the creation of more compelling multimedia documents and improves performance and ease of use in key areas such as installation, printing, networking and extensions management. Best of all, Mac OS 7.6 is designed to install easily and works with all System 7 based applications and files. It incorporates new features designed to improve the way you work including : Live Objects component software; enhanced support for PC files and media (including Windows 95); and advanced networking and printing functionality.

KEY BENEFITS:

INTEGRATED INTERNET
Latest versions of OpenDoc, Cyberdog, and Open Transport software including the Apple Internet Connection Kit.

IMPROVED PC COMPATIBILITY
Includes PC Exchange, Mac OS Easy Open, and DataViz MacLinkPlus translators.

FASTER, SIMPLER NETWORKING
Open Transport (OT) speeds and simplifies networking.

STATE-OF-THE-ART MULTIMEDIA
QuickTime Media Layer (QTML) makes it easier than ever to produce and play back high-impact multimedia such as video, sound, and 3D graphics.

SPEEDIER PRINTING
Speeds printing as much as 35%, simplifies setup, and lets you switch printers quickly.

NEW EXTENSIONS MANAGER
Simplifies configuration and troubleshooting.

9600/233 32/4Gb/12xCD/Cache

The Power Mac 9600/233 is top of the line in speed, performance, expandability and upgradeability, which is tremendous news for publishers - particularly those working with advanced colour - as well as multimedia professionals and engineers.

- Power PC 604e at 200 or 233 MHZ
- Integrated FPU, 64K cache
- 4MB IMS accelerated Video Card
- 32MB of RAM, expandable to 768MB
- 512K level 2 cache
- 4GB SCSI hard disk
- 12-speed CD-ROM
- Ethernet
- Six PCI expansion slots
- Composite and S-video video input and output
- Support for Speech Recognition and text-to-speech capabilities
- Support for dislplay resolutions of up to 1600 by 1200 pixels
- 24 bit colour up to 1152 by 870 pixel reolution
- Refresh rate of up to 75Hz

200Mhz
£2895
or £30 per week

With 20" Apple monitor ONLY £3975

8600/200 32/2Gb/CD/Zip

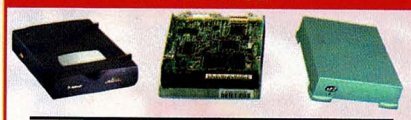
ONLY
£2249
or £24 per week

With 20" Apple monitor ONLY
£3299
or £34 per week

If your profession demands a high-performance, expandable computer that's optimised to make work easy, choose the Power Macintosh 8600/200 system. This high-performance computerincludes built-in video-in and video-out capabilities in an innovative new design. It includes features that make it an ideal choice for in-house publishing, media authoring, and technical applications

- PowerPC 604e at 200MHz
- 256K cache
- Integrated FPU and 64K cache
- 32MB of RAM, expandable to 512MB via 4 DIMM sockets
- 2GB SCSI hard disk
- 12-speed CD-ROM
- Internal Zip drive
- Three PCI expansion slots
- Ethernet
- Stereo audio input and output support 16-bit audio and up to 44.1-kHz sampling rate
- 1MB of VRAM, expandable to 4MB
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color up to 1024x768 resolution

STORAGE



Quantum Internal 1.2Gb Hard Drive	£175.00
Quantum Internal 3Gb Hard Drive	£245.00
Quantum Internal 4.5Gb Hard Drive	£595.00
Syquest Flyer 230Mb	£159.00
Flyer 230Mb Cart	£19.00
Syquest SyJet 1.5Gb	£349.00
SyJet 1.5Gb Cart	£59.00
d2 External 2Gb	£275.00
d2 External 4Gb	£525.00
d2 CD ROM Writer	£375.00
d2 12x CD ROM Drive	£185.00
Nomai 540Mb MCD	£215.00
Nomai 540Mb cart	£39.00

All storage devices include power supply, cables and media where applicable

Windows 95 or a Mac? NOW you can have both!

V. 4.0
£265

V. 3.0
£195

SoftWindows 95 is pre-loaded with Windows 95 to give Mac users the very best of both worlds. One click puts a fully functional software PC inside your machine, another click and you're working in Windows 95 and Mac environments side by side.
New SoftWindows 95 v 4.0 is now Internet ready so you can browse active Web pages with Java and ActiveX, and access PC files on the Internet and intranet. With our improved graphics support, all new 32 bit drivers and patented TurboStart SoftWindows 4.0 performance is the best yet.
If you'd rather just run Windows, try SoftWindows 3.0 - it's 35% quicker than any previous version. Either way you'll have the most cost effective solution to the Mac - PC dilemma.

INSIGNIA SOLUTIONS

MEMORY

4Mb SIMMS 72pin	from £25.00
8Mb SIMMS 72pin	from £35.00
16Mb SIMMS 72pin	from £60.00
32Mb SIMMS 72pin	from £125.00
8Mb DIMMS 168pin 70ns	from £35.00
16Mb DIMMS 168pin 70ns	from £55.00
32Mb DIMMS 168pin 70ns	from £125.00
64Mb DIMMS 168pin 70ns	from £245.00
PowerBook RAM	please call

NON POWERMAC
POWERMAC

LIFETIME WARRANTY!!! TECHWORKS

HFC Consumer FINANCE

Why pay cash or tie up your credit card when you can lease you new Mac over a 2 or 3 year period at low, low interest rates. Tailored specifically for the home user.

Apple Commercial Credit LEASING

MacLine offer a full range of leases that can be customised to suit the needs of both small businesses and large organisations from around £1000 to £100,000 and beyond if needed. Based on quarterly leasing costs.

Netscape: MacLine OnLine
Location: Mill House, Mill Lane, Carshalton, Surrey SM5 2WZ
VISIT OUR WWW PAGES
http://www.macline.co.uk/
ORDER ON-LINE AND GET CHEAPER DELIVERY!

Check prices and order on-line at http// www.macline.co.uk

Free tech support on all products bought from MacLine

Free on-site maintenance with every Mac, provided by Apple

Free RAM install when you buy computer and extra RAM together

Order up to 5.30pm and still get next day delivery!

The oldest Mac mail order company in the UK - in our 10th year!

MacLine

BRITAIN'S OLDEST MACINTOSH MAIL ORDER COMPANY

MacLine

MILL HOUSE • MILL LANE • CARSHALTON • SURREY • SM5 2WZ

SALES HOTLINE 0181 401 1111
FAX: 0181 401 1112

PHONE NOW FOR A LIST OF SALE ITEMS, SPECIAL OFFERS AND LIMITED STOCK - UPDATED DAILY

BRITAIN'S FAVOURITE MACINTOSH MAIL ORDER COMPANY

MACROMEDIA
World-leading creative products

ONLY **£425**
SAVE £873!

FreeHand Graphics Studio 7.0

Turn your ideas into reality using **FreeHand 7.0**'s illustration, design and page layout capabilities. Produce accurate 3D models and animations with **Extreme 3D 2.0.** Composite, edit and manipulate your hi-res images with **xRes 3.0** Add hundreds of variations to your existing font library with **Fontographer 4.1.** Graphics Studio 7 contains **Shockwave**, clip art, photos, 3D models, and fonts.

Director Multimedia Studio 6

ONLY **£845**
SAVE £1053!

A brand new version of the best multimedia authoring bundle. The Studio, with its authoring environment and fully integrated tools will bring your projects alive, whether it's images, sound, 3D animation, or multimedia on the Web.

FLASH 2.0 new

ONLY **£189**
While stocks last

New Macromedia Flash 2.0 is the easiest way for Web designers to create Shockwave multimedia – with no download lag! Now vector-based interactive web animations, buttons, and graphics can be used on every Web page. Flash animations add drama to your Web pages focusing your audience's attention right where you want it - without slowing down the browsing experience.

WHY NOT PAY US A VISIT

Why not call into our showroom and choose from a great selection of hardware, software and accessories all at incredibly low prices!! Close to central London with ample parking

We are only 15 miles from Central London, 7 miles from junction 8 on M25, 25 minutes by train from Victoria Station and 5 minutes walk from Carshalton Station.

FUJIFILM DIGITAL IMAGING
Leading photographic technology

Take great pictures with no hassle, no developing and no waiting with this new digital camera from Fuji - one of the leading names in the photographic market.

- High quality digital still camera - no film or processing required.
- Uses built-in 'live' LCD monitor as viewfinder
- Captures full VGA resolution via350,000 pixel CCD
- Instant picture playback - choose the pictures you want, discard the rest.
- Records on to ultra-compact, 2MB SmartMedia disk
- Download pictures to PC or Mac via serial cable or SmartMedia (via PC Card Adaptor)
- Enhance, sharpen or manipulate your pictures with FREE copy of Adobe PhotoDeluxe

Included in the box:

- **DS-7 Digital Camera**
- **Interface Cables**
- **Data Transfer software (CD)**
- **Adobe PhotoDeluxe**
- **SmartMedia card**
- **4xAA Alkaline Batteries**
- **4xAA Nicad Batteries**
- **Nicad battery recharger**
- **Camera case**

ONLY **£389**
Great Deal! SAVE MONEY ON FILM & PROCESSING

WORD PROCESSING

WRD5	**Microsoft Word v6.0** (market leading WP)	£249.00
NSWR	**Nisus Writer v5.0** (multiple languages capability)	£99.00
THDR	**SpellCatcher** (spellchecker, works in all applications)	£45.00
WDP3	**WordPerfect v3.51** (trade-in from any other word processor)	£55.00

DATABASES

4DFR	**4D First** (powerful and fully relational starter database)	£95.00
ACTA	**ACT!** v2.5 (excellent contact management)	£149.00
CORG	**Claris Organiser v2** (full featured new database)	£65.00
FLMR	**FileMaker Pro v3.0** (now with relational features)	£155.00
INFG	**InfoGenie** (info organiser, supercedes QuickDex)	£45.00
NOWB	**Now Up-To-Date v3.6 & Now Contact v3.6 Bundle**	£79.00

BUSINESS

ASTD	**Astound v2.0** (powerful presentation package)	£159.00
CLWI	**ClarisWorks Internet Edition** (leading integrated package)	£85.00
DLTG	**Deltagraph Pro v4.0** (best graph and chart program)	£149.00
EXCL	**Microsoft Excel v5.0** (market leader, great features)	£249.00
UGMSF	**Microsoft Office v4.2** (Word, Excel, PowerPoint) cross trade	£185.00
WRKS	**Microsoft Works v4.0** (WP, DB, Comms, Draw, SSheet)	£85.00
MCMY	**MacMoney v4.0 UK** (home accounts/budgeting package)	£65.00
MYOB	**MYOB v6.0** (integrated single user business accounts)	£139.00
PERS	**Persuasion v4.0** (high end presentations with outliner)	£195.00
PWPT	**PowerPoint v4.0** (powerful, intuitive, easy inteface)	£265.00
SINQ	**Route 66** CD ROM (road routefinder, includes UK map)	£35.00

GRAPHICS

PHSPB	**Adobe Collection** v2 (Pshop 4, Illust. 6, Dimen. 2, ScrnReady)	£525.00
CNVS	**Canvas v5.0** (long awaited new version)	£345.00
CLDW	**ClarisDraw** (powerful, easy to use draw package)	£109.00
UGCRM	**CorelDraw v6.0** (trade in from any graphics package)	£99.00
ADIM	**Dimensions** (Adobe's 3D extension for Illustrator)	£99.00
DBLR	**Dabbler v2.0** (great beginners paint program)	£49.00
PSERM	**Fractal Design Poser v2.0** (create human figures)	£145.00
FRND	**Freehand v7.0** (professional PostScript drawing & text)	£295.00
MMSF	**Freehand Graphics Studio v7.0** (Fhand 7, X3D, Fonto, X-Res)	£425.00
UGRNGB	**Freehand Graphics Studio v7.0** (upgrade from Freehand 5.5)	£159.00
INFD	**Infini-D v4.0** (leading 3D modelling & rendering tool)	£595.00
ILST	**Illustrator v7.0** (pro PostScript drawing, text & layout)	£279.00
KPTG	**KPT Power Goo** (fun photo retouching program)	£39.00
KPTK	**Kai's Power Tools v3.0** (amazing filters for Photoshop)	£89.00
KPTV	**KPT Vector Effects** (Illustrator/FreeHand FX Plug-Ins)	£89.00
KPTC	**KPT Convolver** (adds power and ease to Photoshop)	£89.00
KPTD	**KPT Bryce v2.0** (3D Skies and landscapes)	£129.00
KPTS	**KPT Soap** (3D Skies and landscapes)	£129.00
RYDS	**Ray Dream Studio** (3D design, modelling, animation)	£299.00
PHOD	**PhotoDeluxe** (cut-down PhotoShop for non-professionals)	£79.00
PHSP	**PhotoShop v4.0** (world's favourite retouching tool)	£389.00
PNTR	**Painter v4.0 (the premiere painting program) special offer**	£149.00
TRBC	**TurboCAD 2D/3D** (budget but powerful CAD package)	£105.00

DESKTOP PUBLISHING

ACRBM	**Adobe Acrobat v3.0** (paperless publishing)	£155.00
ATMC	**ATM Deluxe v4.0** (manages and smooths screen/printer fonts)	£49.00
CAIP	**Click Art** (65000 clip art images)	£34.00
CBGB	**Corel Gallery II** (15000 clip art images)	£25.00
FLCH	**FlightCheck** (pre bureau check on Xpress/PageMkr docs)	£245.00
FNTG	**Fontographer v4.1** (best professional font creator)	£299.00
PMKR	**PageMaker v6.5** (power and ease of use) while stocks last!!	£375.00
QKXZ	**Quark Xpress v3.32**	£649.00
QKxx	**Quark Xtensions** (we carry a wide range)	please call
UNIQ	**Uniqorn** (create Java content easily) Huge Price Reduction!!	£295.00

PRINTERS

ECS60	**Epson Stylus 600** (A4 colour inkjet, 1400dpi)	£245.00
ECSH	**Epson Stylus XL A3** (A3 colour inkjet)	£895.00
HP34	**HP DeskJet 340** (portable colour inkjet)	£169.00
HP66	**HP DeskWriter 660c** (colour and mono in one)	£185.00
HP87	**HP DeskJet 870Cxi** (Mac & PC)	£335.00
PWPR	**PowerPrint** (driver and cable for non-Apple printers)	£79.00
STYS	**StyleScript** (print PostScript to StyleWriters)	£69.00

MONITORS

S21X	**Radius PrecisionView 21**	£1045.00
SN15C	**Sony 15" 100sx MultiScan Monitor CPD**	£295.00
DP17T	**Mitsubishi DiamondPro 17" 67TXV**	£449.00
DP17	**Mitsubishi DiamondPro 17" 87TXM**	£525.00
DP21	**Mitsubishi DiamondPro 21" 91TXM**	£1095.00

SCANNING

AFSS	**Agfa SnapScan** (300 x600dpi, 24 bit colour)	£169.00
AFSF	**Agfa Duoscan with Tranny Unit (Mac)**	£2895.00
AVCS	**Avision 100CS** (colour desktop scanner)	£179.00
COOL	**Nikon CoolScan II** (35mm slide scanner)	£745.00
UVSA	**Umax Vista S6** (600dpi)	£210.00
UPLS#	**Umax PowerLook Colour Studio II from**	£699.00
OMPP	**OmniPage Pro 7.0** (OCR directly into applications)	£365.00
PPVX	**PaperPort VX** (greyscale desktop OCR and scanning)	£189.00

DIGITAL CAMERAS

FDSA	**Fuji DS7** (MacUser Best buy winner)	£389.00
KD25	**Kodak DC25** (point & click, auto exposure)	£299.00
SNDSAK	**Sony DSC-F1 Digital Camera with KPT Soap (Mac)**	£595.00
KDCA	**Konica Q-Mini Digital Camera (Mac & PC Support)**	£449.00

COMMUNICATIONS

SPR5	**US Robotics Mac Voice/Fax/Modem 33.6**	£119.00
TLPP	**TelePort Internet Edition** (33.6 modem from Global Village)	£125.00

GRAPHICS AND PUBLISHING SOFTWARE

Solve ALL of your storage problems quickly, easily, reliably and cheaply

Zip Drive £99

Zip Cart x 1 £13
13p per MB!!

This little device can cure "Not enough hard disk space" error messages for good! Each one of its formatted cartridges holds 100MB - which is 70 times the capacity of a floppy! It comes with one cartridge to start your Zip library, and when that one is full - simply buy another cartridge. If you buy the cartridges in 6 packs, the price is under 10p per Megabyte!!! You can even catalogue and organise files easily with the Zip tools software, and secure confidential files using built-in password protection. There is no limit to the amount of cartridges you can use and access time is almost the speed of a fast hard drive. It really is the ultimate home, office and studio data storage and transfer system

Zip Cart x 6 £59
10p per MB!!

iomega

Jaz drives and disks are the ideal solution for storing, transporting and accessing large files. You can pack up to 1 gigabyte of each disk, and there is no limit to the number of disks you can use. The Jaz drive's speedy access times and rapid transfer rate mean you can quickly and easily move files around. And the Jaz drive can handle even the most demanding usage's. With a Jaz drive, you can back up a 1 gigabyte hard disk in as little as 5 minutes. When all of your hard disks are full, and optical drive technology lacks the performance you need, and floppy disks are just too small and slow - Jaz is the answer you are looking for.

- Faster than most hard drives (works as fast as you do!)
- Provides 1GB of disk space on each compact cartridge
- Portable - goes where you go

Jaz Drive £275

Jaz Cart £65
7p per MB!!

JOIN THE INTERNET
With MacLine

We understand the problems of connecting a Mac to the Internet and can help you navigate through the maze of IP, TCC/IP and MacTCP. It's easy when you know how!

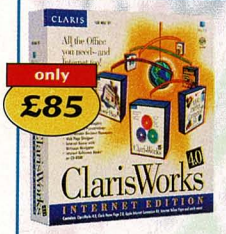
£25.00 joining fee and £12.00 per month

....and the joining fee is halved when you purchase a modem.

FULL INTERNET ACCESS FOR MAC USERS!
WORLD-WIDE-WEB, EMAIL, FTP, GOPHER

CLARISWORKS INTERNET EDITION

CLARIS



only **£85**

ClarisWorks 4.0 - Internet Edition provides a full set of office productivity and Internet software to handle all your office needs and make it simple to surf the Internet and create your own web pages. It includes **ClarisWorks 4.0** with customized small business documents, the **Apple Internet Connection Kit, Claris Home Page**, plus the Internet Yellow Pages and The ABC's of the Internet books on CD-ROM.

• All the Office You Need **available on CD only!**

ClarisWorks has all the office productivity you need in one powerful, integrated application. Combine word processing, outlining, spreadsheet, charting, presentations, graphics and paint tools all on a single page.

•Create Web Pages with Claris Home Page

Create and publish your own dynamic Web pages in just minutes - without having to learn HTML programming. The intuitive user interface, step-by-step instructions and clip art collection make it easy to create eye-catching Web pages.

•Easy Internet Access and Reference Books

Get on the Internet in minutes via a selection of Internet Service Providers and Netscape Navigator. The ABC's of the Internet and Internet Yellow Pages books on CD-ROM help you take advantage of the fast resources available on the Internet.

NETWORKING

ANET	**LocalTalk (AppleTalk) connector kits**	£15.00
ASDB	NetDoubler (increase network speed)	from £49.00
FTNP	**PhoneNet connector kits**	£12.00
FEHD	**EtherLan Hub 5** (5 port Ethernet 10baseT Hub)	£65.00
FAIR	**Farallon AirDock** (Infra Red LocalTalk connector)	£69.00
QKML	**QuickMail v3.6 10 User** (powerful, flexible E-Mail)	£349.00
ASPA	**AsantePrint** (Ethernet to AppleTalk printer router)	£249.00

MULTIMEDIA

MDRT	**MacroMedia Director NEWv6.0 IN STOCK NOW!!!!**	£799.00
FLSH	**Macromedia Flash 2.0** (create lightning fast web graphics)	£189.00
PRMR	**Premiere v4.2** (Adobe's brilliant QuickTime editor)	£399.00
QKIM	**Quark Immedia** (use Xpress to create multimedia files)	£695.00
VIDD	**Video Director v2.0** (edit your home videotapes)	£89.00

PC COMPATIBILITY

DSMT	**DOS Mounter 95** (read/write PC floppies) limited offer	£55.00
MLPT	**MacLink Pro** (best Mac/PC link with100's translators)	£105.00
SFWD	**SoftWindows v3.0** (special offer - while stocks last)	£195.00
SFWE	**SoftWindows 95** (New v4.0)	£265.00

INTERNET

4DFI	**4D First Internet Server** (fast, relational server)	£109.00
HMPG	**Claris Home Page** v2.0	£79.00
BK5010	**Internet Starter Kit** (the best book)	£36.86
CLEM	**Emailer 2.0** (great mail program, supports many services)	£45.00
EDRAA	**Eudora v2.1** (most popular mail package)	£59.00
INET	**Internet Access Kit** (Internet dial up, email, Web, FTP)	£25.00
NTSCB	**NetScape Navigator** (best browser, includes manuals)	£59.00
PGML	**PageMill v2** (the WYSIWYG way to create web pages)	£65.00
STML	**SiteMill v1** (eases maintenance of Web Sites)	£139.00
WBBY	**Web Buddy** (makes your surfing easier)	£39.00

POWERBOOK

CCPx	**Carry Case** (Apple or third party)	from £19.00
PCNA	**Ethernet Card** (Farallon 10BaseT PCMCIA card)	£145.00
TPCM	**TDK Modem** (PCMCIA 28.8 fax modem)	£175.00

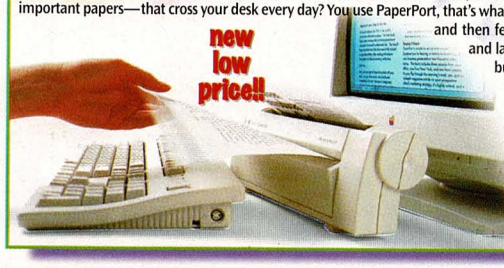
ACCESSORIES

	Cables, Toners and Ink Cartridges (for laser & inkjet printers)	call
KBCF	**Extended Keyboard** (15 function keys, numeric pad)	£35.00
QCKM	**QuickCam** (mono video camera for QuickTime)	£75.00
QCKL	**Colour QuickCam** (colour video camera for QuickTime)	£159.00
AGMJ	**JetStick** (joystick for the control you've always wanted)	£39.00
SESY	**Security Systems** (is your Mac vulnerable to theft?)	from £29.00
TMADD	**Thinking Mouse** (4 button with software)	£49.00
TMADC	**Turbo Mouse** (top selling trackball)	£69.00

VISIONEER *The World's leading paper management system*

PaperPort Vx

Okay, so you have no trouble getting paper out of your Mac. But what do you do with the articles, letters, receipts, and business cards—the important papers—that cross your desk every day? You use PaperPort, that's what! Just plug PaperPort into your Mac's printer or modem port and then feed in a piece of paper. PaperPort grabs the paper, scans it and launches the software automatically—there isn't even an ON button! Instantly useful. PaperPort begins to display your documents on the screen even before you're through entering them! Now you've got electronic copies that you can retrieve at any time, using PaperPort's easy-to-use search tools. Streamline your work. With PaperPort's direct links to word processors, OCR software (included!), printers and fax modems, you can file, edit, annotate, print and send your documents directly to others.



ONLY **£189** free software

WCU6D	**Wacom ArtPad II A6** (inc Dabbler)	£105.00
WCU5	**Wacom UltraPad A5**	£199.00
WCU4	**Wacom UltraPad A4** (professional)	£299.00
VR256	**256K VRAM Chips** (adds more colours)	£19.00
VR512	**512K VRAM Chips** (adds more colours)	£25.00
VR9A	**1Mb VRAM DIMM** (for 7200, 7500, 8500)	£29.00

PROGRAMMING

HYPC	**HyperCard v2.3.5** (new version, more power)	£89.00
CDWG	**Metrowerks Code Warrior Gold v11** (PowerMac compiler)	£290.00
CDWJ	**Discover Programming with JAVA**	£65.00
FTBS	**FutureBasic II** (the best Basic for Mac, inc. PG Pro)	£179.00

UTILITIES

ATMC	**ATM Deluxe v4.0** (manages and anti aliases fonts)	£49.00
CPTV	**Captivate** (professional screen capture utility)	£55.00
INVU	**Conflict Catcher v4.0** (INIT manager and more)	£55.00
NDBP	**DiskDoubler Pro** (Disk,Auto and Copy Doubler)	£59.00
HDTK	**Hard Disk Toolkit** (the best formatter and checker)	£109.00
NUME	**NEW!! Norton Utilities v3.5** (best selling utilities package)	£79.00
NOWU	**Now Utilities v6.5** (suite of essential utilities)	£59.00
POPF	**PopUpFolder** (view folder contents with submenus)	£29.00
QCKY	**QuicKeys v3.5** (macro maker, time saver utility)	£59.00
RAMD	**RamDoubler v2** (actually doubles your available RAM!)	£45.00
SPED	**SpeedDoubler v2** (greatly improves performance)	£45.00
THDR	**SpellCatcher** (spellchecker, works in all applications)	£45.00
SFDL	**Stuffit DeLuxe** (famous file compression program)	£63.82
SUIT	**Suitcase v3.0** (manage your font menus)	£55.00
HDTT	**Turbo Toolkit** (speeds up startup and Finder)	£45.00
OPDT	**DeskTape Pro** (treats DAT as if it were a 2Gb drive)	£199.00
PRSB	**Personal Backup** (best value backup on the market)	£29.00
RTSP	**Retrospect v3.0** (powerful archival backup)	from £119.00
SAM	**SAM v4.5** (Symantec's anti virus utility) special offer	£49.00
VIRX	**Virex v5.7** (best virus tracer & eradicator of all)	£59.00
HDTB	**Bundle - HDTK, D ROM Toolkit, Turbo Toolkit, HSM Toolkit)**	£129.00

All prices exclude VAT

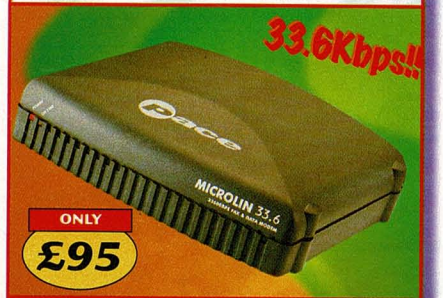
Open Monday to Friday 9am to 6pm
Saturday 10am to 4pm.

pace

MICROLIN 33.6 for Mac

The new MICROLIN 33.6 for Mac is the ideal modem solution for anyone who wants to get their Mac connected to the world at the highest possible speed. The MICROLIN 33.6 for Mac is ideal for high speed Internet access, e-mailing friends and colleagues and sending and receiving faxes directly from and to your Mac.

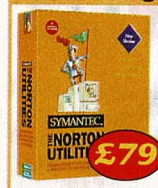
- 33.6Kbps desktop modem
- High speed send and receive fax
- Error correction and data compression
- Extension socket for parallel telephone connection
- Supplied complete with cables
- Fax and data communications software
- Free Internet trial software



ONLY **£95**

SYMANTEC.

Best-selling Mac tools & utilities

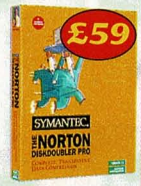


The Norton Utilities 3.5

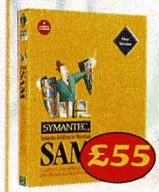
Put these new, essential, award-winning tools to work for you and never fear data loss again! The Norton Utilities 3.5 is the most powerful collection of tools ever developed for protecting and recovering your data. The award-winning technology recovers data where others can't and is **your best bet for 100% data recovery.**

£79

Norton DiskDoubler Pro



Try the brilliant Norton DiskDoubler Pro - and double the capacity of your existing hard disk, instantly and automatically. The award winning technology compresses files an average of 50 percent, and up to 99 percent. It's the **fastest, tightest, safest compression available.**



SAM 4.5

The war against computer viruses is over, and you've won! Symantec AntiVirus for Macintosh automatically locks out viruses and repairs infected files. SAM is the highest-rated, best-selling Macintosh virus protection program in the world - the fastest and most unobtrusive. **Install SAM once and never worry again!**

Suitcase

Suitcase is an essential tool for everyone who works with fonts. You can group fonts into sets for quick access; display them within applications using WYSIWYG font menus; and sample fonts in any size and style to take the guesswork out of selection. You can even link fonts to specific applications, so your fonts will automatically open when you need them.

EDUCATION

		inc VAT	(ex VAT)
	FROM 3 YEARS UPWARDS		
KDMH	**KidsMath** (takes kids from counting to arithmetic)	£34.08	(£29)
KDPX	**KidPix II** (wonderful paint program with sound effects)	£29.38	(£25)
NMBM	**NumberMaze** (award winning arithmetic tutor)	£41.12	(£35)
RDMZ	**ReadingMaze** (letter recognition to sentences)	£41.12	(£35)

CD ROM

		inc VAT	(ex VAT)
	EDUCATION		
ARTT	**Arthur's Teacher Trouble** (interactive story book)	£29.38	(£25)
ARTB	**Arthur's Birthday** (more Arthur)	£29.38	(£25)
FNMRD	**Creative Writer & Fine Artist on CD ROM**	£41.12	(£35)
LJZCD	**Logical Journey of the Zoombinis** (rave reviewed)	£29.38	(£25)
HHHS	**Harry and the Haunted House** (the new best seller)	£29.38	(£25)
KDPCD	**KidPix Studio** (KidPix plus animation)	£29.38	(£25)
RUFF	**Ruff's Bone** (adventures with Ruff the dog)	£29.38	(£25)
HARECD	**Tortoise and the Hare** (the epic race)	£29.38	(£25)
	REFERENCE		
3DAT	**3D Atlas** (simply wonderful)	£45.83	(£39)
MAGCD	**Art Gallery** (Microsoft's tour of the National)	£34.08	(£29)
CINI	**Cinemania '97** (19000 movie reviews and more)	£29.38	(£25)
GRLCD	**Groliers Encylopaedia 97** (21 vols, 9 million words!)	£41.12	(£35)
OEDCD	**Oxford English Dictionary** (the whole thing)	£264.38	(£225)
REDCD	**Red Shift** (superb astronomy program)	£41.13	(£35)
UHBCD	**Ultimate Human Body** (Dorling Kindersly's one)	£29.38	(£25)
NCRTD	**Encarta 97 USA Edition**	£81.07	(£69)

ENTERTAINMENT

		inc VAT	(ex VAT)
	BEST SELLING GAMES ON CD		
MRTHCD	**Marathon 1 and 2 Bundle** (can you resist?)	£29.38	(£25)
WRGCD	**Warcraft II** (detailed graphics, haunting sound)	£37.61	(£32)
ACSOC	**Actua Soccer** (set to be number one for sure)	£31.72	(£27)
MJPCD	**Mah Jong Parlour** (classic oriental game)	£41.13	(£35)
ELACD	**Electronic Arts Top 10 Pack 1**	£34.07	(£29)
MYST	**MYST** (magical mystery adventure)	£37.61	(£32)
SIMCC	**Sim City 2000 Collection** (with extra goodies)	£41.13	(£35)
PRPCD	**Prince of Persia I & II** (two of the best ever)	£17.63	(£15)
	BEST SELLING GAMES ON FLOPPY DISK		
ERIC	**Eric's Ultimate Solitaire** (a dozen patience games)	£41.13	(£35)
A10A	**A10 Attack** (the best flight sim around)	£45.83	(£39)
F18H	**F/A18 Hornet** (from the creators of Hellcats)	£57.58	(£49)
BRDG	**Bridge** (not the Golden Gate but the card game)	£29.38	(£25)
FLSM	**Microsoft Flight Simulator** (realistic, accurate)	£41.13	(£35)

MacLine Policy

*Credit cards will not be charged until the order is shipped.
*If a partial order is despatched, the balance is sent free of additional shipping charges.
*All goods are sent by a courier service. A signature will be required on delivery.
*Same day delivery in London area is available.
*Defective goods are replaced immediately, subject to availability.
*Prices are correct at the time of going to press. E&OE. We cannot guarantee the prices printed here as they are out of our control and will occasionally be higher or lower. Please check prices with us before placing an order.
*Refunds will only be given on unopened packages that are returned within 7 days of receipt.

THESE PRICES ARE FOR BUSINESSES ONLY AND EXCLUDE VAT. CONSUMERS PLEASE CALL.

CALL FOR OUR FREE CATALOGUE

Access · American Express · VISA · Switch

Apple Authorised Reseller

Ordering & Payment

*To order please telephone on Mon - Fri, 9.00am to 6.00pm or Sat 10am to 4pm
*Delivery from only £5.00. (If the goods are not in stock when you order, the charge for delivery still applies).
*Payment is by Credit Card, Switch, Cheque, Bank Transfer or Money Order only. We DO NOT surcharge Credit Card orders.
*Government Departments, Educational Establishments and Plc companies are welcome to purchase with an official order, subject to status. Call our Accounts Department for details.
*International orders accepted with Credit Card or Bank Transfer only. Shipping charges will be added at cost price.

MacLine

BRITAIN'S OLDEST MACINTOSH MAIL ORDER COMPANY

Extreme 3D

So just what can you achieve with this fantastic 3D modelling and rendering program on our Cover CD? Lindsay Bruce starts a new series with the intros...

We've all seen fabulous examples of 3D imaging on television, in the cinema, in magazines and in adverts. Wherever you look, it seems that a computer and a 3D program have been there first.

Imagine being able to create a whole new world inside a computer, where you can make anything you like without being bound by physical laws. Imagine being able to create new objects, even characters, and then bring them to life on your Mac's screen with a few mouse clicks. Your Mac and 3D software make this possible. Traditionally, of course, 3D programs are expensive and hard to get into, but not any more. This issue, we bring you Macromedia's *Extreme 3D 1.0*, a 3D modelling and rendering package that's easy enough for anyone to use.

The idea behind 3D software is simple. It works just like a 2D drawing package, but with the added dimension of depth, so every object has width, height, and depth (x, y, and z respectively in most programs). A 3D program is like a virtual studio: you have a workspace called a "scene", within which you create and place objects. You give the objects a texture or pattern and real-world properties such as transparency, decide where the light is coming from, just as if you were painting a picture – then just sit back and watch as your Mac works out how these objects would look in the real world.

You'll find all you need to get started in 3D on this issue's bonus Cover CD, and in the next five issues of MACFORMAT we'll take you through the basics of 3D art, from some of the basic tools in *Extreme 3D* (this issue) right up to complex 3D modelling and animation.

Creating a good 3D model is not the easiest of tasks. You need to know what each of the modelling tools is capable of and how the object you're trying to model might be constructed. Once you have done the modelling, you need to place it in a scene with a background and add textures and light to each object. It's a good idea to plan your scene out before you start, so you know exactly what you want. This is especially important if you're doing an animation, a feature that *Extreme 3D* has provision for.

Getting creative

Let's start with the creation of 3D objects. All 3D programs have provision for drawing basic shapes (cubes, spheres and cones) known as primitives – you'll find these in *Extreme 3D's* tool palette, labelled with a cone icon (see the box to the right). But things are never so perfect in real life, and you'll find that you'll soon have to experiment with the more complex and powerful modelling tools.

This issue, we'll jump right in and explore some of these. Once you've got the hang of them, you'll find you can create just about any shape you like.

The interface for most 3D programs can be a little daunting at first, as there is a bewildering array of tools and options. Once you scratch the surface, though, you'll find them quite easy to use. Before you start modelling, it's a good idea to set some preferences for your working environment. When you launch *Extreme 3D*, it opens a single window, with a default size of 512 x 384 pixels. You can resize it beyond this if you want.

If you have a 17-inch monitor (or a 15-inch multisync monitor capable of displaying 1,024 x 768 resolution), you'll want to see still more. You can select **Four-view Setup** from the **Window** menu. This puts four windows on screen, each looking at the workspace from a different angle – front, top, left, and isometric (called a three-quarter view). The isometric view is shaded by default, while the others are all in wireframe mode to speed up screen redraw. You can change the viewing angle in any of the windows by clicking on them and changing the setting under the **View** menu in the menu bar. You can also set the amount of perspective (depth of field) used to display objects.

You'll find that most objects you create are derived from a 2D shape known as a "profile". This is simply an outline of a shape, which you can draw within the program or import from a 2D drawing package such as *FreeHand* or *Illustrator*. How the 3D object is then generated from the profile depends on which of the modelling tools you use. The three basic 3D modelling tools are **Extrude, Lathe,** and **Sweep**. The basics of how these work are explained on the opposite page.

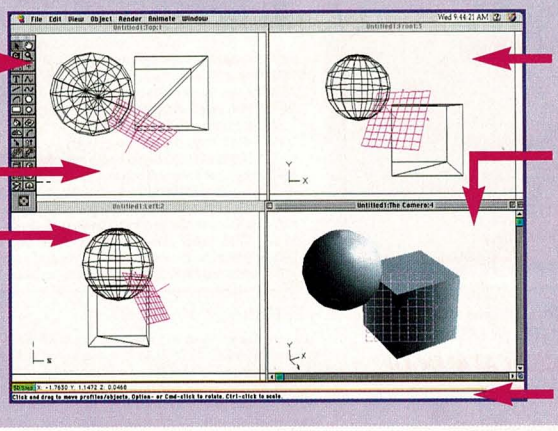
Once you've got the gist of this, then well done – you've mastered the hard part! Once you know what kinds of shapes you can produce with *Extreme 3D*, you can start building your own models, which is what we're going to look at next issue: how to create 3D models of everyday objects from scratch. **MF**

On the CD

Extreme 3D, its online manual and tutorial files are all on our Cover CD. Each issue we'll be putting models, textures, animations and tutorial files on the Cover CD for you to play with. Once you've got the hang of producing your own 3D art, send your masterpieces in for inclusion in the "Readers' Corner" section on the CD. The address is on page 14.

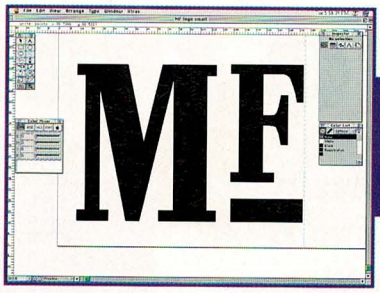
The tools

Extreme interface

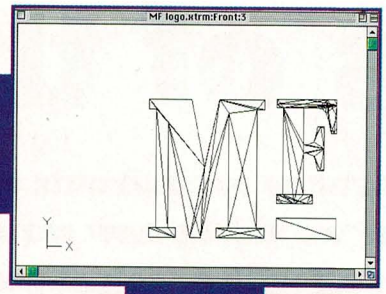

Main toolbar: this contains Extreme 3D's geometry and modelling tools (see above right).
Top view
Side view: you'll probably use the top and front views most, but this view is handy for positioning objects precisely.
Front view
Three-quarter view
Tool space and status bar: displays information on tools and objects. Here you can type in specific dimensions for the 3D objects you create.

The Extrude tool

This simply takes a 2D profile and gives it a depth that you specify. It's rather like pushing Plasticine through a keyhole. In this case, the shape of the profile is the "keyhole". There are two **Extrude** tools in *Extreme 3D:* one straight and one with a bevel. The latter puts a bevel (again, you set how much) on the edges of the profile.



1 Here's our profile – a 2D outline that we're going to turn into a 3D shape. To extrude it, select the object, click on the **Extrude** tool (the cube-like icon in the bottom left of the tool palette), and type the depth you want into the tool space at the bottom of the screen.



2 And here is the extruded object. *Extreme 3D* splits the profile into a a number of polygons that are linked together and gives them a depth. This enables you to model and render more complex shapes.

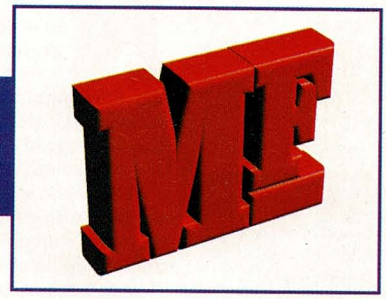
Save £400!

More features, particle animation, organic metaform modelling and much more can be yours in *Extreme 3D 2.0* at a very special price – see page 9!

What you need

To run *Extreme 3D,* you need a 68040-based Mac (a Quadra) or any PowerMac with 16Mb of RAM (minimum), 20Mb of hard disk space, 256 colours on your monitor and System 7.0 or higher with QuickTime. Note that Macs based on the 68LC040 (such as the Performa 630) won't run *Extreme 3D*, as it requires an FPU (Floating Point Unit).

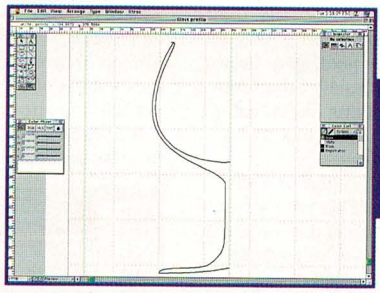
3 Here's the finished object rendered with a texture. Extruding is good for creating objects that have the same cross-section along their length.



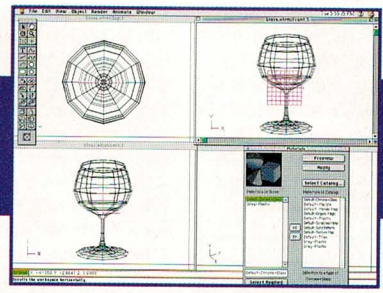
4 This is the same profile, but extruded with the bevel **Extrude** tool. You specify the bevel width, but it must be less than half of the extrusion depth.

The Lathe tool

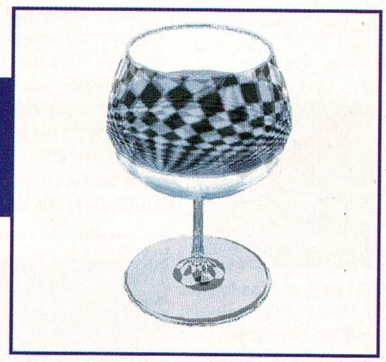
Lathing an object is akin to handling clay on a potter's wheel. The 2D profile is replicated around an axis and the resulting ribs linked together. This is useful for creating objects that have an axis of symmetry, such as a wine glass.



1 Again, we start with a 2D profile; the profile is usually one half of the finished shape. We're going to turn this profile into a wine glass. To do this, first select the profile, and click on the **Lathe** tool (the cylinder icon in the bottom right of the tool palette, next to **Extrude**). Now click on one end point of the axis you want to lathe around – in this case, the vertical axis. Select the second end point of your axis and let go of the mouse button.



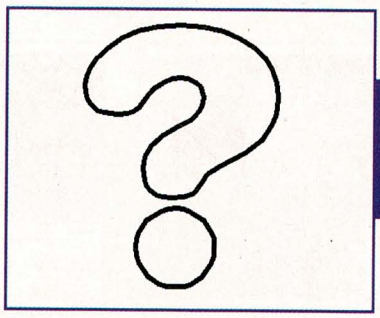
2 You should now have something looking like this. For accurate results, once you have selected your first axis point, you can constrain the second to the vertical or horizontal plane by holding down **V** or **H**, respectively.



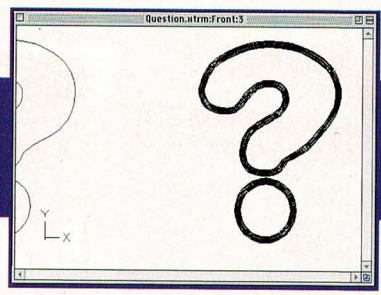
3 Here is our finished rendered wine glass. The transparent texture is in the **Materials** palette under **Chrome and Glass.** Select the lathed object and click the **Apply** button in the **Materials** palette. Fiddle with the transparency settings until you get it right. We'll be looking at textures some more over the next few issues.

The Sweep tool

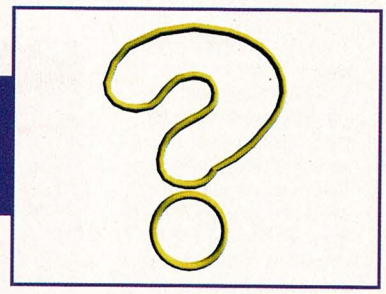
This tool enables you to take a profile and create complex shapes such as corkscrews. It works in two ways: you can specify the distance, rotation and scaling between each rib of the sweep in a dialogue box, or you can sweep along a path (the method *Extreme 3D* uses). A path is a line in 2D or 3D; the tool replicates the profile along it and then links the resulting "ribs".



1 Here is our profile (the small oval) and a path imported from *FreeHand,* which started life as a standard text character. You can create paths using any of the drawing tools in *Extreme 3D* or import a path from another program. The oval forms the object's cross-section.



2 Select the **Sweep** tool from the tool palette (below the **Extrude** tool) and click on the profile you wish to sweep. Then click on the path object you have defined previously. After sweeping, you can see *Extreme 3D* has replicated the oval along the path to form a tube in the path's shape.



3 You can see the object better when rendered. Note the stepping effect between ribs, which is sometimes unavoidable when using the **Sweep** or **Lathe** tools. In these cases, you'll need to get rid of the steps in an image-editing program such as *Color It!* (on the MACFORMAT 50 Cover CD) or *xRes* (on the MACFORMAT 47 CD). (For back issues, see page 115.)

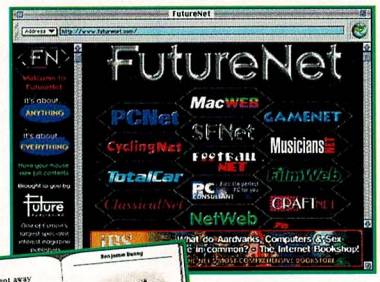
Tricks of the trade

Is it your dream to learn the ins and outs of desktop publishing? This issue we start a new series on DTP, and Rod Lawton kicks off with a look at graphics...

Nothing stands still for long in desktop publishing. Macs get faster and cheaper, the software gets more powerful and ambitious, and the range of media is expanding all the time. Do you publish on paper or electronically? Are you designing a multimedia presentation or a Web site? Are you producing short-run literature on a high-quality Desktop colour printer or four-colour film for commercial printing processes?

With this new DTP series we're not going to tell you how to design a newsletter or get the most out of *PageMaker*. Instead, we're going to look at your raw materials – graphics, text, fonts – and show you how to make them work for you, whatever your interests.

We're also going to show you how to hook your readers in, help them navigate through your magazines, presentations or Web sites, and how to make sure your publication develops an identity and style of its own. This issue, we kick off with a look at graphics, often the most troublesome and time-consuming part of any publication. So keep reading, and find out which format to use and how to maximise the quality of what you've got and keep your file sizes under control...



They went away hand in hand, and got upon the flat top of the wall at the bottom of the wood. From here they looked down into Mr. McGregor's garden. Peter's coat and shoes were plainly to be seen upon the scarecrow, topped with an old tam-o-shanter of Mr. McGregor's.

In this series we're concentrating not just on print publishing, but on the business of multimedia and Web site design too.

PC Plod

If you've got to swap files with a PC owner, use TIFF format for bitmaps and EPS format for vector graphics.

Vector vs. bitmap

Despite the vast plethora of graphics file formats, there are only two basic types: vector and bitmap. Vector graphics are "drawings" and are made up of lines and shapes which have their own colours. Although you can create subtle patterns or graduated tints from one shade to another, vector-based images can't match the detail and complex tonal variations of real photographs, and will always look like drawings. They do have big advantages, though. For a start, because the shapes are defined mathematically, they can be scaled up or down to any size you like without becoming pixellated. Vector files are usually much smaller than bitmap files, too, and making individual colour changes and moving objects relative to one another is easy.

If you want to publish photographs, however, you'll be working with bitmap files. These are made up of dots or pixels ("picture elements"), they're generally larger files, they can't be effectively scaled up (they can be scaled down, though), and they tend to be fiddly to edit. But although certain image editing actions are harder, bitmap image editing applications offer tools for altering contrast and brightness, sharpening edges, removing dust and scratch marks, changing the colour balance and applying artistic special effects. See the table of common Mac graphic file formats on the opposite page for more information.

Do your photos look a little flat? Image-editing programs like *Color It!* (yours free with MACFORMAT 50) can put that right with a combination of brightness and contrast adjustments.

Size matters

Vector-based graphics are easy to work with – you can scale them up and down, and the same file will print at all sizes. Bitmap images aren't so obliging, because they consist of a fixed number of pixels, not mathematically-defined outlines.

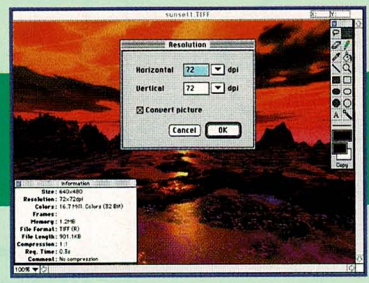
You can't actually increase the detail in a bitmap image, any more than you

Vector-based images remain smooth at any size, but always look artificial. They're perfect for diagrams and logos, though.

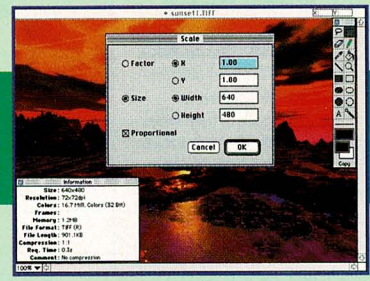
Optimising images for a Web page

When you're preparing graphics for the Web, you want the best possible quality, combined with the smallest possible file size (to avoid excessive download times). Here are some tips on how to achieve both, using an excellent sunset scene created in *Bryce 2* by MACFORMAT reader Ian Brookes. For the record, our final image is full-colour, high-quality, fills the width of a Web page and is only 68K...

1 The original file looks terrific. The only problem is that it weighs in at nearly 1Mb, which is far too large. Using an average dial-up connection, it would take around 15 minutes to download – and nobody's going to hang around that long for a Web page to appear.



2 So you need to reduce the file size. First, check the resolution of the image – open it up in *GraphicConverter* (in the **Resources** folder of the Cover CD), and choose **Resolution** from the **Picture** menu. 72dpi (screen resolution) is as high as you need to go.



3 The next job, and the one that can make the biggest difference, is to change the size. Decide how big the image is going to be on your Web page (in pixels), and then choose **Scale** from the **Size** sub-menu in the **Picture** menu and type in your chosen values.

Bitmap images have a fixed level of detail. Enlarging them simply makes individual pixels more prominent.

can endlessly blow up a video image, so although an image-editing program enables you to enlarge a picture, you have to stop when the image gets mushy.

Bitmap images can also have different resolutions. For example, 72dpi (dots per inch) is fine for on-screen viewing, but you'll need 300dpi or more for your image to look good in print, simply because printing is a higher-resolution process that shows up a lack of detail.

Resolution, the image's physical dimensions and its file size are inextricably linked. When you reduce an image's resolution, you're effectively making the pixels smaller. So, although the image grows sharper and shows more detail, its physical dimensions shrink.

There's an important distinction here. The physical size reduction you get from increasing the resolution is not the same as the size reduction you get when you use your image-editing application's "resize" function. When you change resolution, you're simply swapping detail for size: but resizing an image changes the amount of detail it contains.

So you should first set the resolution correctly, then type in the precise dimensions you want, which will give you the most efficient graphic possible. Don't do it the other way round – if you resize the image to the required dimensions and then worry about the resolution, you can't get the detail back.

Bitmap images have one further complication – colour depth. Photographic images can contain millions of colours, and to identify a specific colour out of all these millions, each pixel needs 32 bits of memory (hence the terms "32-bit colour" or "32-bit graphics"). This means that 32-bit images (capable of reproducing 16.7 million different colours, to be exact) make for rather large files. You can also have 16-bit images, which are capable of reproducing only (only!) 32,768 colours – but this may be enough to reproduce photographs without any obvious loss of quality. The advantage is that the files are around half the size because each pixel only needs 16 bits of memory. Eight-bit images are problematical because they only reproduce 256 colours, which limits them to simple artwork. Few photos survive being converted into 256 colours.

GraphicConverter and most other image-editing applications can convert 32-bit files into 16-bit and so on. As with resizing bitmap images, though, while you can benefit from smaller file sizes by reducing the colour palette, you don't gain anything by increasing it.

Graphic file formats

Format	Bitmap	Vector	Comments
PICT	✔	✔	Handles vector and bitmap images. Fine if all your output is either on-screen or via a desk top printer, but not up to professional publishing.
TIFF	✔		The Mac's standard bitmap format. It gives you much more control over the image than PICT and is used for professional publishing.
GIF	✔		A bitmap format widely used on the Internet, but one which supports only 256 colours. No good for photographic images, but excellent for logos and cartoons, and produces very small file sizes.
JPEG	✔		The bitmap file format to use when file size is a problem. It offers much smaller file sizes than PICT, with little loss in quality. Ideal for photos.
EPS		✔	The "professional" vector format. More sophisticated than the PICT format, it's used by pro-level programs like *Illustrator* and *FreeHand*.

Cosmetic enhancement

So far we've only looked at ways to optimise your bitmap images for publication. And while you can't add detail or colours that aren't there in the first place, there are common faults that you can correct. For example, you may have to use photos which are badly exposed or out of focus. *GraphicConverter, Color It!, Photoshop* and most other image-editing applications enable you to alter contrast and brightness. The colour casts you get from photographs taken in artificial light can also be corrected – at least to a degree.

But if you get more ambitious, and create cutouts or photo-montages, you'll need a more expensive application like Adobe *Photoshop*, or its cheaper companion *PhotoDeluxe*. The hard part about cutouts is defining the area you want to cut out. *FreeHand's* lasso tools aren't accurate enough, and although many programs offer "magic wand" tools to select areas of similar tone, these are useful only when you have a plain, smooth-toned background. The best solution is an application which enables you to create "paths" around the object you want to cut out, which means *Photoshop*, or one of its high-end rivals. **MF**

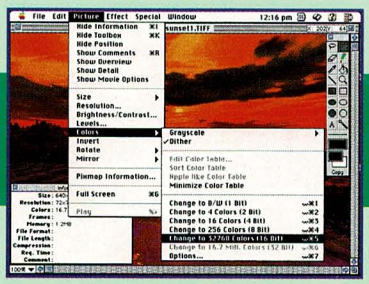
To create montages, you need the Path and Layering tools of *Photoshop*. Its companion product *PhotoDeluxe* is cheaper and can handle layers and cutouts too.

CMYK

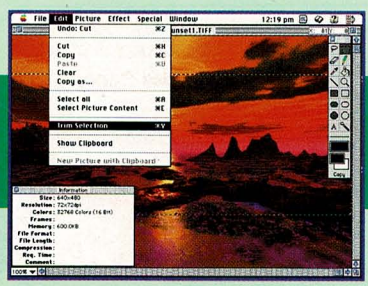
If you're producing graphics to be printed in CMYK (four-colour, or process, printing), you need software that supports this – *Adobe Photoshop* for example. Many less expensive applications don't.

Higher res?

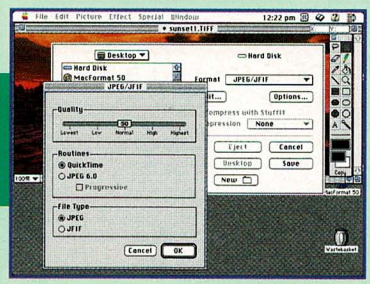
Just because your bureau's imagesetter outputs at 2,000dpi or more, don't imagine your scans have to be at the same resolution. Because of the limitations of the screen printing process used in commercial printing, 300dpi will probably be fine. Check with your bureau and your printer first.



4 Another way to reduce the file size is to minimise the picture's colour palette (choose **Colors** from the **Picture** menu). Reducing a 32-bit image to a 16-bit image may make no noticeable difference to the quality, but it will easily halve the finished file size.



5 We haven't finished yet, either. Do you really need all of the image? Can you simply crop in on a part of it? If so, use the rectangular selection tool in *GraphicConverter* to select the part you want to use and then choose **Trim Selection** from the **Edit** menu.



6 Lastly, save your image in JPEG format. It's specially designed to offer maximum compression without losing quality in photographic-style images. You can even experiment with the compression settings to find the best trade-off between compression and quality.

Next issue

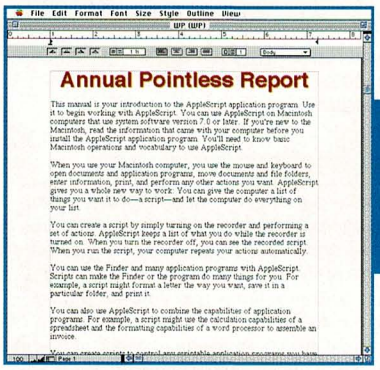
Should you use TrueType or PostScript? What's anti-aliasing? What if people viewing your on-screen document don't have your fonts? Answers to these questions and more next issue!

Columns, the ClarisWorks way

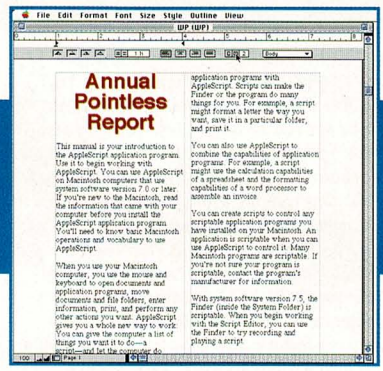
Give your word processing documents the professional look in minutes by using columns. Derek Smith shows you how...

Okay, so *ClarisWorks* may not be a fully-fledged DTP program, but it does have all the basic features you need to create some good-looking documents without too much time or effort. Here we look at two projects that use columns to smarten up what would otherwise be a rather dull report.

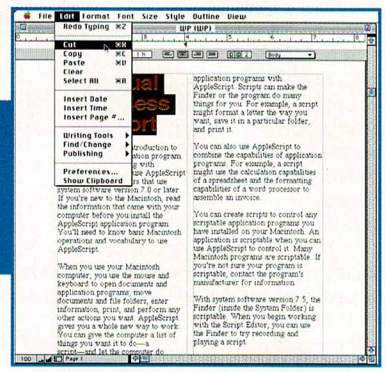
There are two methods of creating columns in *ClarisWorks*, and they work in importantly different ways. Method one involves the creation of columns in the word processor module. Here you create a set number of columns, which will be



1 It's not important whether you write your text first and put columns in later or type your text into columns. Here we're starting with our text already written.



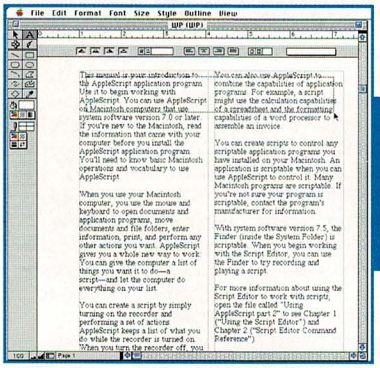
2 On the ruler bar are two column buttons. The right one increases the number of columns, the left one decreases it. In this case two columns are enough.



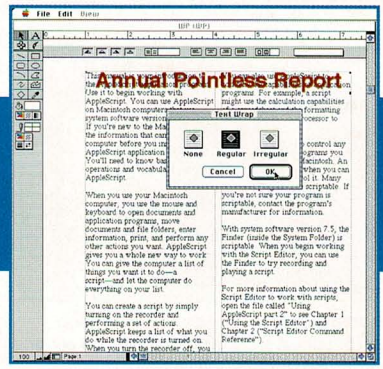
3 The heading is now contained in the first column, whereas we want it to span the width of the page as it used to do. First you need to cut the heading out.

Margins

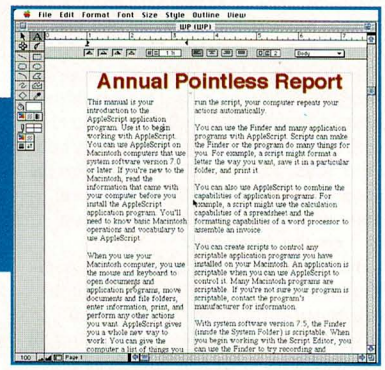
Another way of setting up your columns is to choose **Section** in the **Format** menu.



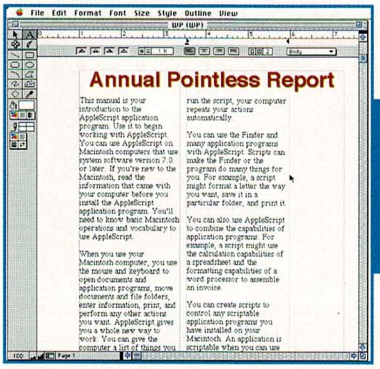
4 Draw a text box by selecting the text tool, hold down the **[option]** key, and then drag a rectangle. (It's best to draw your rectangle slightly smaller than you need and enlarge it later on.)



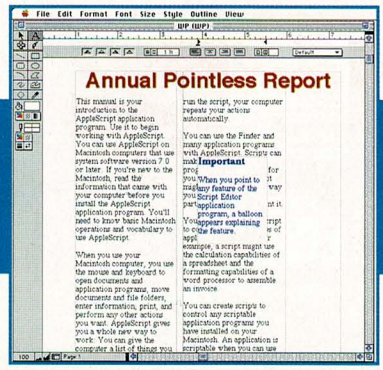
5 Paste your text in the text box, then click the selector tool (which is the arrow on the toolbar) and choose **Text Wrap** from the **Options** menu. You need to select **Regular** text wrap.



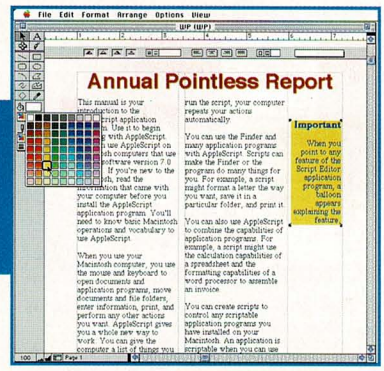
6 We want a spare area on the right-hand side of the page for notes. You can manually drag the column gutter simply by holding down the **[option]** key and using the mouse.



7 Drag the right-hand edge of the right column, by holding down the **[option]** key and dragging the edge of the column until it's the same width as the first one.



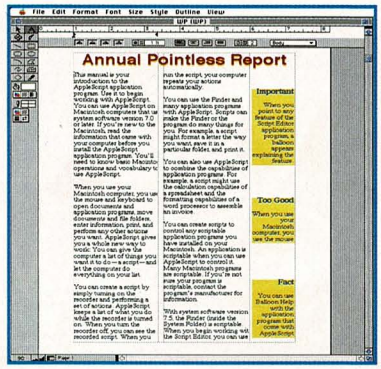
8 Create the margin notes by drawing text boxes, as with the heading, but create them in the middle of the page and move them across afterwards.

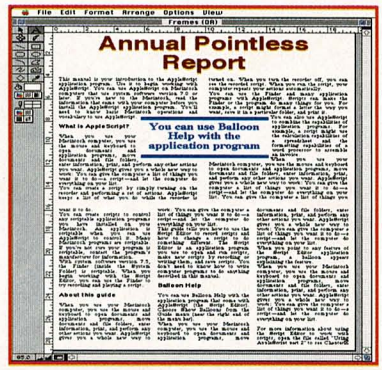


9 You can colour the gutter notes, if desired, by selecting the text box and choosing a fill colour from the normal fill colour pop-up menu that's on the toolbar.

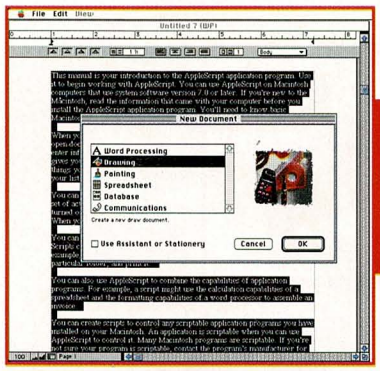
identical on all pages. The advantages of this sort of column are that they take seconds to create, are uniform on every page, and are easy to alter retrospectively. These columns are suitable for a report with many pages that doesn't require anything too clever.

The other method of creating columns is to draw them, DTP-style, in the **Draw** module. Here the columns don't have to be uniform throughout the document, thus giving much greater flexibility. For instance, the first page could have two columns, while subsequent pages have three. The disadvantage is that because you have to draw them manually, they take longer to create, and might take more effort to alter at a later date. This sort of column is best suited to smaller, complex documents. **MF**

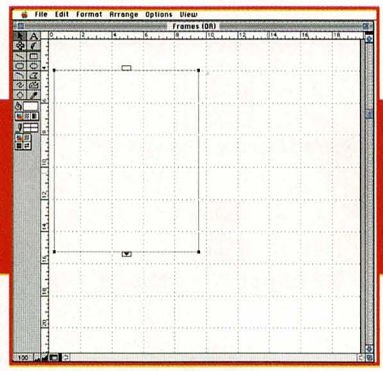




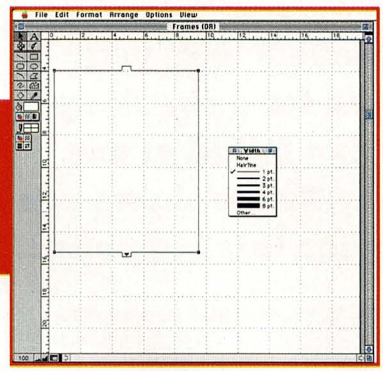
A structure layout draws the reader's attention to important details. Here, we're using two columns with a half column for margin notes.



1 Write your text in the word processor and copy it to the Clipboard. Create a new **Draw** document (you can only create linked frames in the **Draw** module).

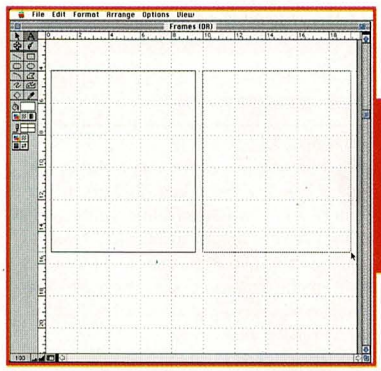


2 Choose **Frame Links** from the **Options** menu, select the text tool and draw a column (no need to hold down the **[option]** key), but don't paste yet.

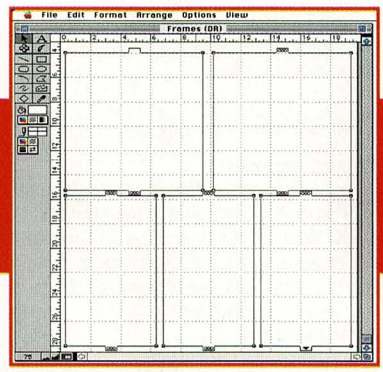


3 This step is optional, but you can give the text frame a coloured border so that you can subsequently see the white text frame on a white background.

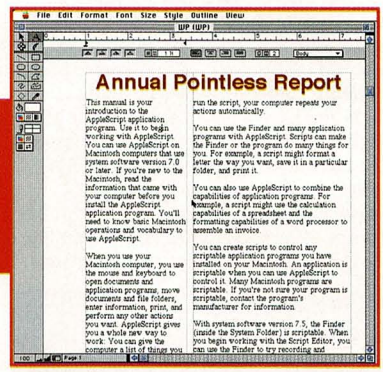
Using different column layouts on the same page is used to great effects in newspapers and magazines. Here, the introduction is given more impact with a justified two-column layout and a callout, while the rest of the article is in three columns.



4 Click the black arrow at the bottom of the first column and draw your second column. You'll notice that there is a link symbol at the foot of the first column and at the head of the second.



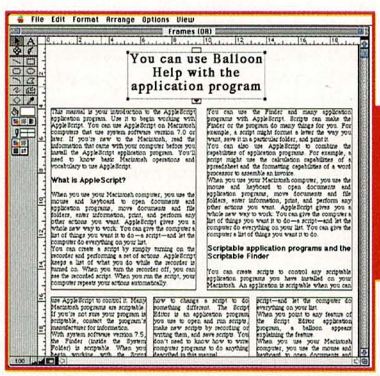
5 You can continue to create any number of frames by clicking the black arrows. But you can't insert a column in the middle of the sequence later or link to an already existing frame.



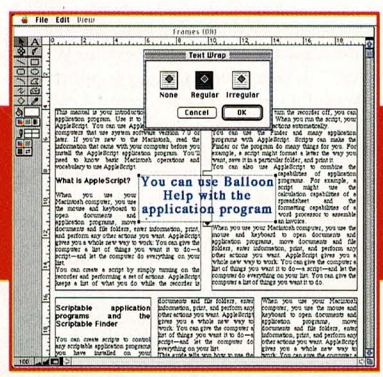
6 At this point you can paste your text into the first frame, and it'll flow across all of the frames. If there's too much text, you'll see a small cross in the bottom right of the last frame.

Unlinking

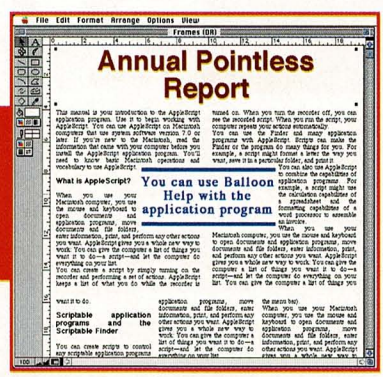
The only way to unlink text boxes in the Draw module is to delete the text box. But don't worry, you won't delete any of your text.



7 To create the callout, start by drawing a new text frame away from your text – otherwise, when you drag the mouse, you'll accidentally highlight existing text.



8 Move the callout frame to the desired position and leave it selected. Then choose **Text Wrap** from the **Options** menu and select a **Regular** text wrap.



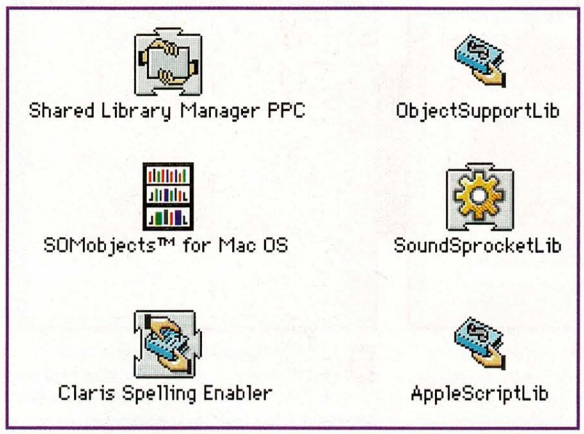
9 Finally, remove any borders you may have given to the frames, then add your title by drawing another text frame just as you did in the first project.

When was the last time you took your Mac for a check-up? Like you, it can fall ill at any time. Lindsay Bruce shows you what to do when this happens...

Prevention is better than cure. It's an old cliché, but particularly relevant to Macs. That's why MacAnswers is here. On these pages you'll find cures for common problems, advice on what to do in an emergency, news on the Mac OS and new versions, as well as bug-fixes and updates. Even if your Mac is in good condition now, you should take at look so that you're prepared if something does go amiss...

If you have a problem with your Mac, write to us at MacAnswers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW. Alternatively, you can e-mail us at **macformat@futurenet.co.uk** with the words "Mac Answers" in the subject line, or fax us on 01225 446019. Sorry, but we can't answer your technical questions over the phone because we have to look the answers up first!

***Netscape Navigator 3.0's* Java support can be memory-hungry and *Navigator* might not give the memory back when you quit.**



Shared libraries are Extensions that are only loaded when needed by a program or the operating system. When they're no longer required, the memory they take up is freed. At least, that's the theory.

The butler did it!

Shared libraries

Q *I have an LCIII and an LC475 running System 7.1. I've tried to use* Apple Media Tool *(on the MACFORMAT 36 Cover CD) and* PageStream 3.2SE *(MACFORMAT 49 Cover CD), but both give the message "InterfaceLib could not be found".*
P Kronenburg,
Clivialaam, Netherlands

A InterfaceLib is what is known as a shared library, a type of Extension your Mac only loads when a program needs it. Shared libraries were originally developed for use on PowerMacs, but are now widely used on 68K Macs as well. Unfortunately, the System version you have, 7.1, does not normally support shared libraries. However, using Apple's **CFM-68K Runtime Enabler** you can use shared libraries on any Mac with a 68020 processor or better, as long as it's running System 7.1 or newer.

The latest version, **CFM-68K 4.0**, is on our Cover CD (don't use any earlier version). To install it, drag both the **CFM-68K Runtime Enabler** and **Object-SupportLib** Extensions onto the **Extensions** folder within your **System Folder** and Restart your Mac. Both *PageStream* and *Apple Media Tool* should now work. For more detailed information on the **CFM-68K Runtime Enabler,** check out Apple's developer technote on the Web at **http://devworld.apple.com/dev/technotes/tn/tn1084.html**.

Java hungry

Netscape 3.0

Q *Whenever I quit* Netscape Navigator 3.0 *on my PowerMac 7200/90, all the memory isn't re-allocated to the System, which means I have to restart my Mac to get the memory back. This only seems to happen when Java is initialised. If I remove the Java components, everything works okay. Is this just a problem with Java?*
Leif Ree-Perderson
Roedknapplia, Norway

A No, it's related to our last question. Java is a programming language that works on any computer, and there are two types: pure Java and JavaScript. For the Internet your browser needs JavaScript – a language that can control certain events on your computer, such as bringing up dialogue boxes when you log on to a site or passing messages along the bottom of the browser's screen. To work on your computer, Java needs to set up a "runtime environment" – a software layer that interprets the JavaScript into commands that both the browser and your Mac can understand. This environment is treated separately from the application code, and acts in much the same way as the code in a shared library.

Shared libraries (yes, it's them again) are loaded into memory only when an application needs them. However, after you've quit that application, the shared library's code remains in memory in case

Bug bytes: bug reports and fixes

System 7.6.1 RAM disk
Apple has discovered a bug in System 7.6.1 that bites when you're using the **RAM Disk** option in the **Memory** Control Panel. On some Macs, if the RAM Disk is enabled, the bug prevents the Mac from shutting down properly. The screen goes blank as usual, but the "It is now safe to switch off your Macintosh" message doesn't appear. This only affects Mac models that do not power down at Shut Down themselves (such as the Quadra 660AV and PowerMac 6100) – you have to switch them off using the power button on the front of the case. Apple is working on a fix for this in Mac OS 8.0. In the meantime, if this bug affects your Mac and you need the RAM Disk feature, Apple recommends you revert to System 7.6, which does not have the bug.

System 7.x compatibility
Apple has released details of which Mac models support which versions of the Mac OS from System 7.5.3 to System 7.6.1. Some Macs and clones based on the Tanzania motherboard (the 4400 and StarMax and CW clones) require a special enabler to run newer versions of the operating system, but this will be included with the machine when you buy it. For details on all models, turn to our Mac Facts table on page 124. More next issue.

it's needed by the next application you run, which saves time launching the program. If the memory is needed by something else instead, your Mac then frees it up by dumping the library's code. At least, this is what should happen. In System 7.5.3 and 7.5.5, this memory sometimes becomes locked and the Mac can't get rid of the unwanted code, resulting in the System software taking up large amounts of memory for no apparent reason. Your case sounds similar. You may find that not all of the Java runtime environment code is being purged from memory when you quit *Navigator*.

There are two solutions: either restart your Mac (not always practical, and also rather time-consuming) or try *MacOS Purge*, a nifty little utility written by an Apple programmer (but not supported by Apple) that unlocks memory held by unnecessary code. It was included on the MACFORMAT 52 Cover CD. Simply run this utility after you quit *Netscape* and it should work its magic. If it doesn't, try updating to System 7.6, which includes a much improved **Shared Library Manager,** the Extension that is ultimately responsible for running shared libraries.

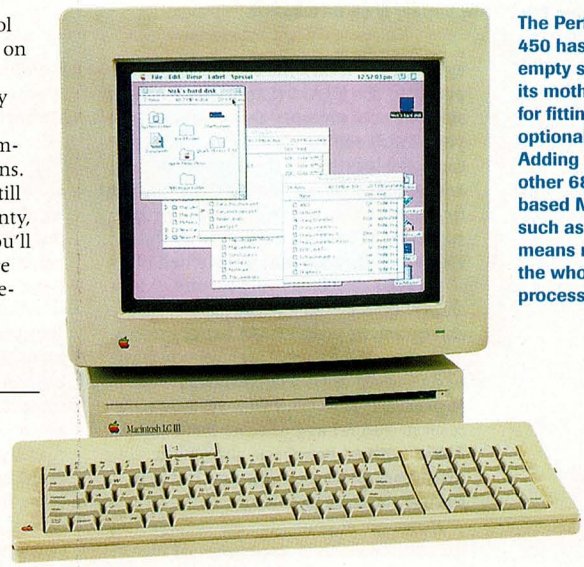
Number crunching

Upgrading

Q *I have a Performa 450. Can I fit an FPU to this machine so I can run 3D applications, for example? If so, where do I fit it?*
Peter Foster, Sandilands, Lanark

A Yes, it is possible. An FPU (Floating Point Unit or maths co-processor) is an extra chip that specialises in number-crunching. It's needed for calculation-intensive operations like 3D rendering and some spreadsheets. The Performa 450 has an empty socket on the motherboard into which you can slot a 25MHz 68882 FPU chip. This is available for around £30 from Mygate Computing (on 0800 018 1424). In some other Macs, such as the Performa 475 and 630, you have to replace the main processor (a 68LC040) with a full 68040, which (like all PowerPC chips) has a built-in FPU. The 475 needs a 25MHz 68040 (about £89) and the 630 takes a 33MHz 68040 (£117). Both are available from Mygate. The processor in both these Macs is in a socket, so you can upgrade it fairly easily. However, you will need a special tool to remove the processor from this socket, such as an IC extraction tool (available from Maplin Electronics on 01702 554000). You should not attempt to remove the processor by any other means (particularly not with a screwdriver) as you will damage the casing or the processor's pins.

And be warned: if your Mac is still covered by the terms of any warranty, don't try upgrading it yourself – you'll invalidate that warranty. Make sure you get the work done by an Apple-authorised engineer.



The Performa 450 has an empty socket on its motherboard for fitting an optional FPU. Adding one to other 68LC040-based Macs, such as the 630, means replacing the whole processor.

It's good to talk

AppleTalk and printing

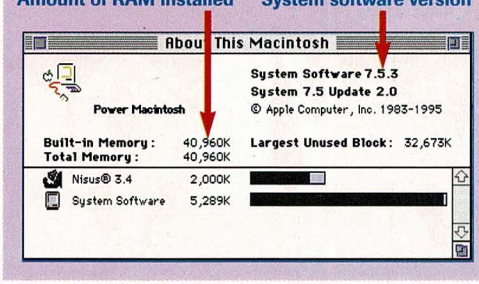
Q *I have a Performa 450 and am having problems printing in* ClarisWorks. *Every time I try to print, I get an error message from* ***PrintMonitor*** *saying that the serial port is being used by another application. But I don't have another application open! I then have to go to the* ***Chooser*** *and switch off AppleTalk before the printer will work. I have to do this nearly every time I print. Is* ClarisWorks *the problem?*
Sharon Owen, Dartmouth, Devon

A Nope, it's not *ClarisWorks*. This sounds like a minor hardware problem. In order that the printer can have the serial port all to itself, your printer's software driver requires that AppleTalk, the Mac's networking software, is not activated. This is true of some printers such as the StyleWriter II, and it applies to both the serial ports (the modem and printer ports) on your Mac.

AppleTalk is on by default unless you specify otherwise. You are switching AppleTalk off to print, but your Mac keeps forgetting that it's supposed ➤

The do-it-yourself problem-solving guide...

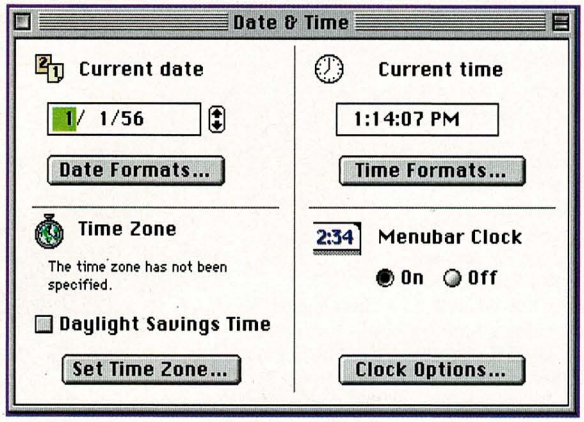
One of the most common causes of problems on your Mac is Extensions or Control Panels clashing in your System Folder. It's easy to check if this is the case. Restart your Mac and hold down the **[shift]** key. Release the key when you get the message, "Welcome to Macintosh. Extensions off." If everything now works, then the problem is likely to be an Extensions conflict.



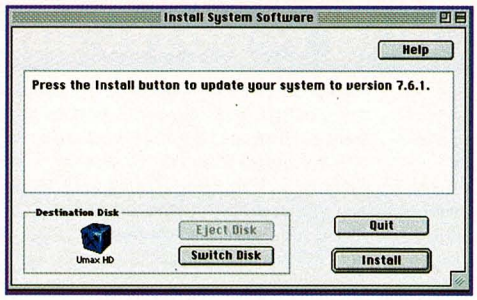
The only way to work out which item is the culprit is by trial and error. Remove a few Extensions or Control Panels, then restart your Mac, without holding down **[shift]**. Keep on doing this until the problem no longer occurs and then you've found the offending software.

If this doesn't work, try rebuilding your Desktop. Start up the Mac holding down **[command]** and **[option]**. You'll get a message asking if you want to rebuild the Desktop. Click **OK**, wait for it to finish and see if this solves your problem.

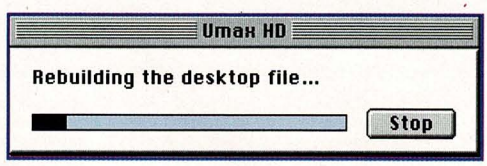
If you're still stuck, use the form on page 65 to write to us. We'll need to know a few facts about your Mac, so when you're in the Finder, select **About This Macintosh** from the **Apple** menu – the crucial things to note are shown at left.



If the date and time on your Mac start going haywire, it's a pretty good bet that the PRAM battery is on its way out.



Left: If you are running System 7.5 or System 7.5.1, you need to install System 7.5.3, then System 7.5.3 revision 2, and then System 7.5.5. Who is Apple kidding?



Right: Rebuilding the Desktop forces your Mac to recatalogue all the files and applications you have on your hard disk. This can solve some anomalies such as lost custom icons.

to be off the next time it restarts. This points to the PRAM (Parameter RAM), a small area of memory that stores some of your Mac's setting such as the date and time, the location of the Startup Disk, and whether or not the Mac is connected to a network or not. A little battery is supposed to maintain the data in the PRAM when your Mac is switched off.

So your problem could be one of two things: either your PRAM has become corrupted, or your PRAM battery needs replacing. If it's the former, all you have to do is hold down **[command] [option] P R** as your Mac restarts to reset it. You'll have to reset the **Date & Time** Control Panel and things like your **Monitors & Sound** settings, but this should clear the problem.

However, if your Mac starts forgetting the date too, this is a sure sign of PRAM battery failure. All you need to do is take your Mac along to an Apple authorised repair centre, where you can have the battery replaced. This will cost something in the region of £15 to £20 and put an end to your problems.

Got any glue?

Desktop files

Q *I have a Performa 5200, and regularly rebuild the Desktop, as recommended by both yourselves and Apple. Sometimes, though, the Mac gives a message saying that the rebuild can't be completed. My files then lose their custom icons and turn into the plain document icons. I've tried rebuilding the Desktop with and without Extensions loaded, but always with the same result.*
Robert Yandle, Cannes, France

A The Desktop files are invisible and reside on your Mac's hard disk, cataloguing every file and application. Their purpose is to keep track of which files belong to which applications, when they were created, and so on. Occasionally rebuilding them (by holding down **[command] [option]** on startup) prevents them from getting bloated with references to files that you have long since deleted. The problem you are experiencing sounds like corrupted Desktop files – your Mac is unable to finish rebuilding them because it can't read or write information to the files.

You should first check that the problem isn't with your hard disk itself. Run *Disk First Aid* over your Mac's hard disk (it's on your *Disk Tools* floppy or on the System CD that came with your Mac). This will identify and try to fix any errors on the hard disk. Alternatively, a utilities package such as *Norton Utilities* (£117 from Symantec on 0171 616 5600) is capable of doing a more thorough examination and fixing more problems.

Once you've checked the disk, try using *TechTool*, which is on our Cover CD every issue. This utility completely erases the Desktop files before rebuilding them, so it can be useful in cases of corrupted Desktop files. *Norton* too has an option for rebuilding the Desktop. Worth trying.

If none of this works, your last hope is to back up your hard disk to an external disk and then reformat it using the **Drive Setup** utility provided with your Mac.

I can't upgrade!

New System software

Q *I have System 7.5 and have tried using the System 7.5.3 revision 2 update on the MACFORMAT 49 CD, but the documentation says you need System 7.5.3 first. If this is the case, how am I supposed to upgrade?*
A Hillion, address withheld

A You should use the System updaters on our more recent Cover CDs, including this issue's. As many users who laboriously downloaded it direct from the Internet also found out, the updater we originally put on the Cover CD couldn't update *every* previous version of System 7.5. However, we've now put the System 7.5.3 updater on the CD as well. To update your Mac from System 7.5 to 7.5.5, you need to run the following updaters in this order: System 7.5.3, System 7.5.3r2, and then System 7.5.5. A hassle, we know, but, hey, we don't produce the updaters, Apple does. Alternatively, if you're prepared to fork out £93, you can buy System 7.6, which offers all the bug-fixes and new features in System 7.5.5, as well as the *Apple Internet Connection Kit* for getting on-line, plus faster Virtual Memory, printing and startup, and other goodies. Contact your favourite dealer.

Mouse freeze

System 7.6

Q *I recently bought the UK edition of System 7.6 and have tried installing it on my PowerMac 8200/120, but when I do so my mouse freezes, although the keyboard commands still seem to work. I can quit the installer and restart the Mac without any problems, but I just can't get it to install the new System version. I do have several drives connected to the Mac – a non-Apple CD drive, Iomega Zip drive, and an external hard drive. Could one of these be causing the problem?*
Alan Miller, Suffield, Norfolk

A Your guess is probably correct, and there is a way round this problem. First of all, disconnect any drives that

YES, I'M DOWN AGAIN, DANNY
IS IT A CACHE PROBLEM?
MIND YOUR OWN BUSINESS!
WELL, COLIN, SOMETHING'S DEFINITELY WRONG WITH YOUR DRIVE
GET REAL! 30 GRAND & A COMPANY BMW – WHAT OTHER DRIVE IS THERE?

aren't necessary for the installation. This means the second hard drive and the Zip drive. Next, you should disable any Extensions that may interrupt the installation process.

If you're trying to install the new System using the System 7.6 CD as a Startup Disk, it could be that it's having trouble with the non-Apple CD drive. To find out if this is the case, disable as many Extensions and Control Panels on your existing Startup Disk as possible – except, of course, the Extensions that are needed to use the CD drive. This usually means the Apple CD-ROM Extension, but you may have got a different software driver with the drive itself, in which case you should use that. With this done, try installing System 7.6 again.

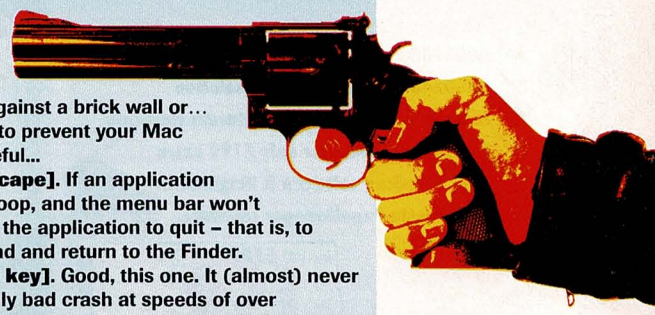
If the installation is successful, you'll then need to get new software drivers for your drives. If your system's still refusing to play, it's probably having trouble with the driver on your hard disk. If you're using a non-Apple driver, you *must* use the most recent version of the driver software. This is critical, as System 7.6 makes some changes to the way drives are dealt with under the Mac OS.

If you have Internet access, driver updates can be downloaded from the Web site of the company concerned. For example, if you're using *FWB Hard Disk Toolkit*, you can obtain the latest driver from **http://www.fwb.com** – or you'll find it on this issue's Cover CD.

If you can't get hold of the most up-to-date software drivers, you'll have to use the Apple drivers that come with System 7.6. This means you'll have to reformat *both* hard drives using **Drive Setup.** Since you have two hard disks, you can simply back one drive up to another, reformat it, then copy your files back. (You're lucky – without a second drive, it's a laborious task involving stacks of floppies.) If you disconnect the Zip Drive, you can leave it as it is for the moment.

Once you've done that, you should be able to install System 7.6. You'll then still need to install any custom drivers in the new System Folder, and get the latest driver for your Zip drive. You can download this from **http://www.iomega.com/cgi-bin/mac353.cgi** or you can find the current driver – 5.0.1, at the time of writing – on our Cover CD, inside the **MacAnswers** folder. **MF**

Trouble-shooting keystrokes



Knowing what magic keys to press when you get into trouble (or more precisely, when your Mac gets into trouble) can make the difference between smacking your head viciously against a brick wall or... well, not. Some of these are a last resort to prevent your Mac from crashing, while others are really useful...

■ Force Quit: [command] [option] [escape]. If an application crashes or gets stuck in what's called a loop, and the menu bar won't respond, you can use these keys to force the application to quit – that is, to stop execution of the program's code dead and return to the Finder.

■ Reset: [command] [control] [power key]. Good, this one. It (almost) never fails to restart your Mac, even after a really bad crash at speeds of over 100MHz. Use it when your Mac has frozen or "hung" (that is, when the cursor won't move and none of the keys appear to do anything).

■ Interrupt: [command] [power key]. This drops you into the mini-debugger, which looks a bit like an empty dialogue box with a prompt (the > character). To return to whatever your Mac was doing before you decided to try this advice out, type G and then press [return]. Don't type anything else in – you may crash your Mac. So what good is this? Well, the interrupt command halts everything in its tracks – even the Operating System – so it's particularly handy if you suspect you have a virus or your Mac is caught up in some arcane process and you need time to think about what course of action to take.

Ask Mac Answers...

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to: MacAnswers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW; or fax it to us on 01225 446019.

Name .....

Address .....

.....

.....

.....

.....

Your Mac
(For example, Performa 475, 7600/120, PowerBook 5300):

.....

System version
(see **About This Macintosh** screenshot on page 59): .....

Amount of RAM
(see **About This Macintosh** screenshot on page 59): .....

Are you using Virtual Memory? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Do you have 32-bit addressing or Modern Memory Manager (PowerMacs only) turned on? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Details of any relevant hardware which could help us to answer your question:

.....

.....

Now, use this space to describe your problem or question. Please include as much relevant information as possible and continue on a separate sheet if necessary.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Jigsaw®

LONGER OPENING HOURS!
MON-FRI 8.30AM-6.00PM
SAT 10.00AM-2.00PM

Authorised Reseller

14" DISPLAYS FROM £129

JIGSAW MICRO 14" DISPLAY MONCOL-322 £129 exVAT
3YEAR WARRANTY 832x624.....

JIGSAW MICRO 15" DISPLAY MONCOL-315 £179 exVAT
3YEAR WARRANTY 832x624.....

UMAX ASTRA 600S 30BIT SCANNER

- 600x300 dpi 30Bit colour scanning
- 4800x4800dpi maximum resolution
- Includes 12 Months manufacturers warranty
- Transparency adaptor only £199 extra
- FREE VistaScan software & MagicMatch
- FREE Presto PageManager software.

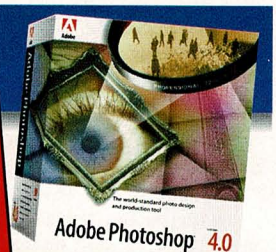
WORKS WITH BOTH MAC & PC
INCLUDES MAC & PC SOFTWARE & PC SCSI CARD

inc. VAT £187
£159 exVAT
£6.29 per month* Business Finance

PHOTOSHOP 4

FULL EDITION ON CD - ELECTRONIC MANUAL
ONLY £269 PLUS
A FREE UMAX ASTRA 600S SCANNER!

ADOBE PHOTOSHOP 4 ON CD COMES WITH PROMO PACKAGING & ELECTRONIC MANUAL ON CD



inc. VAT £316
£269 exVAT
£10.64 per month* Business Finance

NEW! 1440DPI

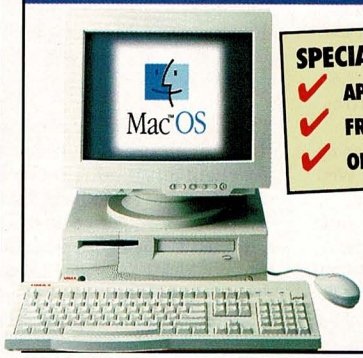
EPSON

STYLUS COLOR 600.....£218 exVAT
STYLUS COLOR 800.....£319 exVAT
STYLUS COLOR 1520.....£585 exVAT
GT9500 SCANNER.....£515 exVAT

Tektronix

ADOBE POSTSCRIPT LEVEL 2, ETHERNET, MASSIVE 24MB RAM, AND 24BIT COLOUR

UMAX APUS 2000 603e/160



SPECIAL OFFER - LIMITED STOCKS!
- APUS 2000 603e/160 16/ 1.2Gb/ 8xCD
- FREE CLARIS WORKS SOFTWARE!
- ONLY £129 FOR 14" OR £179 FOR 15"

inc. VAT £699
£595 exVAT
£23.55 per month* Business Finance

MacOS 7.6

PAINTER 4

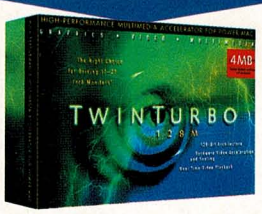
FRACTAL DESIGN CORPORATION

EXPRESSION.....£179exVAT
POSER.....£45exVAT

WACOM GRAPHICS TABLETS

A5 ULTRAPAD £179exVAT

VIDEO CARDS



IMS TWINTURBO 2Mb.....£149exVAT
IMS TWINTURBO 4Mb.....£235exVAT
IMS TWINTURBO 8Mb.....£325exVAT
ATI 3D XCLAIM 4Mb £189exVAT
ATI 3D XCLAIM 8Mb £289exVAT
APPLE QUICKDRAW 3D.....£199exVAT
RADIUS 30/1920.....£1129exVAT
RADIUS 30/1600.....£1489exVAT

FREEHAND 7.0

MACROMEDIA®

DIRECTOR STUDIO 2 .....£799exVAT
FREEHAND STUDIO.....£399exVAT
AUTHORWARE IS £1699exVAT

NEWTON

33.6 MODEM

Tel 0115 916 5588

20,000 SATISFIED CUSTOMERS

Fax 0115 942 2991

• Call Jon Royall or Lesley Jephcotte for Education Prices • sales@jigsawsystems.co.uk •

All contracts are subject to Jigsaw System Limited's Terms and Conditions of Sale a copy of which can be obtained by telephoning us on 0115 9165514 or by writing to us at the following address; Jigsaw Systems Limited, The Old Mill, High Church Street, Nottingham, NG7 7JA, England. All credit cards payments are subject to a surcharge.

Jigsaw®

Authorised Reseller

17" DISPLAYS FROM £299

JIGSAW MICRO 17" COLOUR MONCOL-303
3YEAR WARRANTY 1024x768 ..... £299 exVAT
SONY 17" TRINITRON CPD1701 MONCOL-273
WHITE BOX - LIMITED STOCKS!..... £389 exVAT

LONGER OPENING HOURS!
MON-FRI 8.30AM-6.00PM
SAT 10.00AM-2.00PM

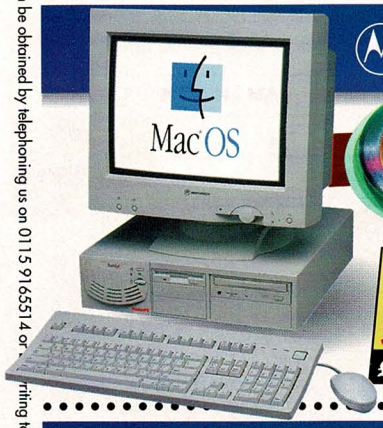
POWERMAC 4400/160 SENSATION
WITH INCREDIBLE 16Mb RAM, & FREE DESCENT CD!

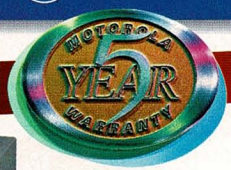
• 16MB RAM • 160MHz • 1.2Gb HD • 8xCD • FREE DESCENT!

- ✓ *160MHz PowerPC 603e processor*
- ✓ *1.2Gb Hard Drive & 16Mb RAM*
- ✓ *8x CD-ROM Drive*
- ✓ *Free Descent CD Software*

inc. VAT **£757**
£644 exVAT
£25.49 *per month* Business Finance*

MOTOROLA STARMAX 3180 DT





AMAZING 5 YEAR WARRANTY + 1ST YEAR ON-SITE

- ✓ *180MHz PowerPC 603e processor*
- ✓ *1.2Gb Hard Drive, 16Mb RAM, 8xCD*
- ✓ *1Mb VRAM & 256K Level 2 Cache*
- ✓ *Ext. Keyboard & Mouse, 3 PCI Slots*

inc. VAT **£823**
£699.99 exVAT
£27.69 *per month* Business Finance*

4400/200 L2/2Mb VRAM/2Gb HD/10 BASE-T

• 16MB RAM • 200MHz • 2Gb HD • 8xCD • 2 PCI SLOTS • 10 BASE-T ETHERNET

- ✓ *PowerPC 603e 200MHz processor*
- ✓ *2Gb Hard Drive, 16Mb RAM, 8xCD*
- ✓ *10 base-T EtherNet & 2Mb VRAM*
- ✓ *256K Level 2 Cache & 2 PCI Slots*

inc. VAT **£1,174**
£999 exVAT
£39.54 *per month* Business Finance*

32Mb version..£1049exVAT

POWERBOOK 1400cs/117

PCMCIA 28.8 MOTOROLA MODEM CARD £99 EXVAT

• 12MB RAM • 117MHz • 750MB HD • FLOPPY • OPTIONAL CD

£500 FREE SOFTWARE WITH POWERBOOK 1400's...

ClarisWorks; Claris Organizer; Route66; Apple Internet Connection Kit software; Netscape Navigator; Claris Emailer Lite, Apple Remote Access; Apple GSM Connection Kit; & Macintosh Easy Open & DataViz Easy Open Translators.

inc. VAT **£1,150**
£979 exVAT
£38.75 *per month* Business Finance*

PB 1400cs/117 16/750/6xCD.....£1169exVAT

★ AMAZING ★

THE OFFERS BELOW ARE ONLY AVAILABLE WHEN PURCHASING ITEMS ON THE LEFT OF THIS PAGE

...APPLE STYLEWRITER 1500 COLOUR PRINTER
£89.99
exVAT (bundle price only)

...APPLE STYLEWRITER 2500 COLOUR PRINTER
£125
exVAT (bundle price only)

...IOMEGA 100MB EXTERNAL ZIP DRIVE & ZIP CARTRIDGE
£98.99
exVAT (bundle price)

HUGE STOCKS - WE WILL NOT BE BEATEN ON PRICE!

...IOMEGA 1GB EXTERNAL JAZ DRIVE & JAZ CARTRIDGE
£284
exVAT (bundle price)

OVER 6 MILLION ZIP DRIVES SOLD WORLDWIDE!

Tel 0115 916 5588

20,000 SATISFIED CUSTOMERS

Fax 0115 942 2991

• Technical Support Tel 0115 916 5510 • Technical Fax 0115 916 5590 • technical@jigsawsystems.co.uk

All contracts are subject to Jigsaw System Limited's Terms and Conditions of Sale a copy of which can be obtained by telephoning us on 0115 9165514 or writing to us at the following address; Jigsaw Systems Limited, The Old Mill, High Church Street, Nottingham, NG7 7JA, England. All credit cards payments are subject to a surcharge.

tasha

COMPUTERS

290 Kensington High Street
London W14 8NZ

Tel: 0171 602 9444 ext 22

Email: kensington@tasha.co.uk

These products are intended for business use and exclude VAT. Goods subject to availability.

AppleCentre

or visit us on the internet at http://www.tasha.co.uk

MEGA DEALS

incredible value from Tasha

- Warehouse Prices
- Authorised AppleCentre
- Show room
- In Stock now
- Collect same day
- Free technical support
- Friendly, knowledgeable People
- Open on Saturdays

REDUCED

WorkGroup Server 7250

This is first time an Apple WorkGroup Server has ever been available for less than £1,399. Y et, it gives the performance and reliability features you would expect from Apple.

- 256K level 2 cache
- 3PCI slots
- Built in Ethernet for faster data transfer over network
- AppleShare 4.2

CPU	MHz	RAM	H/DISK	CD	
601	120	16	1.2GB	4x	**£1,499**

REDUCED

PowerBook 5300cs/100

Based on the PowerPC 603e processor, the Apple Macintosh PowerBook 5300 computers can handle everything from complex spreadsheets to text and graphics intensive reports. It has a 10.4 in dual scan colour display. With two, built-in Type II-size PC Card slots, the powerbook can be customised to one's specific communication needs, using the vast array of industry-standard modems, hard drives, network interface cards and other PC cards.

CPU	MHz	RAM	H/DISK	PRICE
603	100	8	500	**£899**

REDUCED

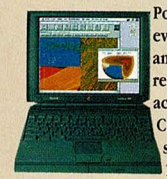
PowerBook Duo 2300c/100

Provides a 9.5", backlit, active-matrix colour display for easy viewing in up to thousands of colours.Is the smallest, lightest powerBook computer, and gives you the flexibility to carry every thing you need. The Duo also comes with the powerBook Mobility Bundle, a combination of communications, compatibilty, power management, security, file-transfer and entertainment Software and built in modem*.

CPU	MHz	RAM	H/DISK	PRICE
603e	100	8	750	**£999**
603e	100	20	1.1GB	**£1,299**

PowerBook 1400

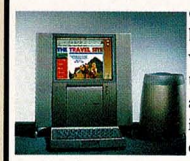
Based on the PowerPC 603e processor, the Apple Macintosh PowerBook 1400 computer can handle everything from complex spreadsheets to text and graphics intensive reports. They feature a removable, modular CD-ROM drive giving you access to the wealth of resources available on CD, including the latest business productivity software and multimedia games. And their 11.3 in colour SVGA displays provide outstanding bright, vivid colours.



CD	MHz	RAM	H/DISK	PRICE
optional	117	12	1.0GB	**£1,149**
8X	117	16	1.0GB	**£1,399**
8X	133c	16	1.3GB	**£2,259**

20th Anniversary Mac

The limited edition Twentieth anniversary Macintosh is a futuristic entertainment centre that includes a computer, built in TV/FM radio tuner, a full complement of video inputs and customised Bose speaker technology for the finest quality sound. In addition to the upright CD-ROM drive and 12.1 inch active martrix screen, the ultra-slim casing of the Twentieth Anniversary Macintosh houses a 250-Mhz RISC PowerPC 603e processor, 32MB RAM, 256KB level-2 cache, 2MB video RAM, a 2GB hard disk drive, 1.4MB floppy disk drive and 33.6-Kbps GeoPort modem. It also includes a cable adaptor for Composite Video, a keyboard with detachable trackpad, standard SCSI and serial ports. Apple's Internet Connection Kit which facilitates surfing on the Internet and Claris Works software are also pre-installed on the computer. A limited number of these computers will be available in September 97. To avoid disappointment place your order now. Call 0181-994 7424 for further details.



PowerBook 3400

- Brings the fastest processor technology over to a powerbook system and 256 level 2 cache
- PowerPC 603e processor
- New larger 12.1" active matrix Display
- Multimedia capability
- 16-bit Video out
- 4-speaker sound system
- PCMCIA slots

REDUCED

CD	MHz	RAM	H/DISK	PRICE
-	180	16	1.3GB	**£2,799**
12X	180	16	1.3GB	**£2,999**
12X	240	16	3GB	**£4,299**

Power Macintosh 8600

If your profession demands a high-performance, expandable computer that's optimized to make complex work easy, choose the Power Macintosh 8600/200 system. This high performance computer includes built-in video-in and video-out capabilities in an innovative design. It includes features that make it an ideal choice for in-house publishing, media authoring, and technical applications. And because its processor is mounted on a removable card for easy affordable upgrade to faster processor cards (as available), you can protect your investment for the future.

CD	MHz	RAM	H/DISK	PRICE
12x	200	32	2.0GB	**£2,199**

Power Macintosh 4400

The Power Macintosh 4400/200 computer combines high performance with a streamlined, cost-effective design that take advantage of industry-standard parts to give you power Macintosh capabilities at a highly economical price. It is an ideal system for small and medium-size businesses, for home offices, and for running productivity applications in organisations of any size. It includes a built -in Ethernet connection, LocalTalk, networking capabilities, and all of the software tools needed to access the Internet.

E/net	MHz	RAM	H/DISK	PRICE
optional	160	16	1.2GB	**£799**
optional	200	16	1.2GB	**£899**
yes	200	16	2.0GB	**£1,049**

Power Macintosh 9600

The PowerMac 9600/233 system is quite simply the highest performance Macintosh available today. So whether you're a publishing professional, a multimedia master, or simply someone who enjoys existing on technology's cutting edge, you will find that this sophisticated system can help you do exactly what you want to easily, effectively, and efficiently.

CPU	MHz	RAM	H/DISK	PRICE
604e	200	32	4.0GB	**£2,499**
2x604e	200	32	4.0GB	**£3,199**
604e	233	32	4.0GB	**£2,899**

Family Mac 5400/5500*

Available in either platinum or black, the new Family Macintosh comes internet-ready and offers an impressive array of edutainment and multimedia software, including titles from Disney Interactive, and now with two additional titles: Actua Soccer and Kai's Power Goo. With Apple's legendary ease of use, this great system now delivers up to 225Mhz from its PowerPC 603e RISC Processor, 2GB hard drive, 12x-speed CD-ROM, TV/FM radio tuner and 33.6 bps modem* with fax, answering machine, and telephony applications, Internet connection Kit, One 7 in PCI slot.

CD	MHz	RAM	H/DISK	PRICE
8x	180	16	1.6GB	**£1,049**
12X	225	32	2GB	**£1,599***

Power Macintosh 7300

The Apple Power Macintosh 7300 series combines affordability, high performance, and upgradability to provide an ideal system for small and medium-size businesses, for home offices, and for running productivity or multimedia applications in organisations of any size. It can be connected to a ethernet network easily. It includes both AAUI and 10BASE-T connectors. It features 12x-speed CD-ROM drive. Softrware included (Microsoft Office 4.2)

REDUCED

CD	MHz	RAM	H/DISK	PRICE
8x	166	16	2GB	**£1,549**
12X	200	32	2GB	**£1,899***

Apple Creative Studio Power Macintosh 6500

- TV/FM Tuner
- Video in Card
- Video out adapter
- Avid Video editing
- Built-in 33.6 modem
- Internet Kit
- Level 2 cache

CD	MHz	RAM	H/DISK	PRICE
12x	250	32	3.0GB	**£1,699**
12X	275	32	4.0GB	**£2,199**

What's worth your cash? Make an informed buying decision with the help of our authoritative tests of products from modems to cinema multimedia.

MACFORMAT REVIEWS

About our reviews

Every MACFORMAT review is designed to inform you in detail of what you'd be getting if you bought the product being reviewed, and help you decide whether it's worth your money. It tells you the essentials, without the jargon.

ON THE CD

This means there's a demo version, preview or sample on our Cover CD

MACFORMAT never just reprints spec sheets, press releases or reports from overseas magazines. Every product reviewed has actually been tested by our own reviewers.

MACFORMAT has a cast-iron policy of editorial independence. We are not influenced by whether the supplier or manufacturer of a product advertises in the magazine. They find out the rating at the same time you do, when the magazine is published.

MACFORMAT *does not review demos or unfinished programs.* We review only the finished products you could buy yourself, to help you decide whether to buy or not.

We give clear buying recommendations, and rate products using the following scale:

- If a product earns a rating of 90% or more, it wins a MACFORMAT Classic Award. This means we judge the product to be a benchmark, a standard-setter of its type.
- 80+% means excellent.
- 70+% means well worthwhile or great value, though not particularly outstanding.
- 60+% means good, but with a few shortcomings or some limitations.
- 50+% means acceptable but flawed or seriously limited.
- A rating below 50% means think carefully before parting with your money (but we do distinguish between a product that's "almost there" and one that's a waste of time).

MACFORMAT Classic

In this issue

Hardware

Modems 70
We test a range of current models from the leading modem makers
Motorola 3400 Pro 72
US Robotics Sportster Voice 73
Global Village Teleport 33.6 73
Pace Microlin 33.6 74
Hayes Accura 33.6 74

PowerBook 3400c/240 76
ONE Pro 4x/6x CD-Recorder 78
Olympus 230 PowerMO II drive 79

Creative and productivity software

E-mail software 80
Eudora Pro 3.0, QuickMail Pro and Claris Em@iler 2 put through their paces head-to-head

Music: Overture 2.0 90

Multimedia

Interactive cinema on CD 98
The Crow 98
Inside Independence Day 99
Romeo & Juliet 100

Earth Quest 102
Geography 103

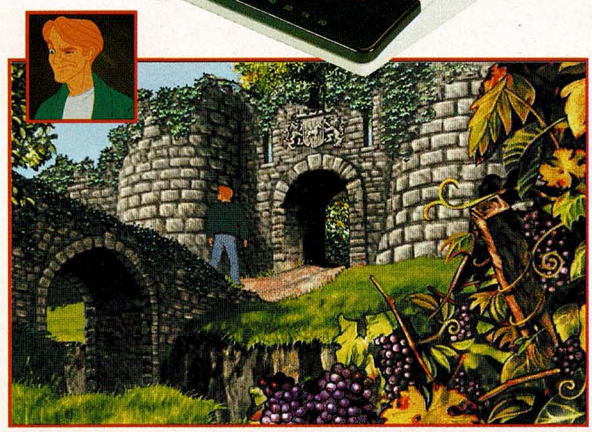
Nursery Rhyme Time 105
abc CD-ROM 105

Games

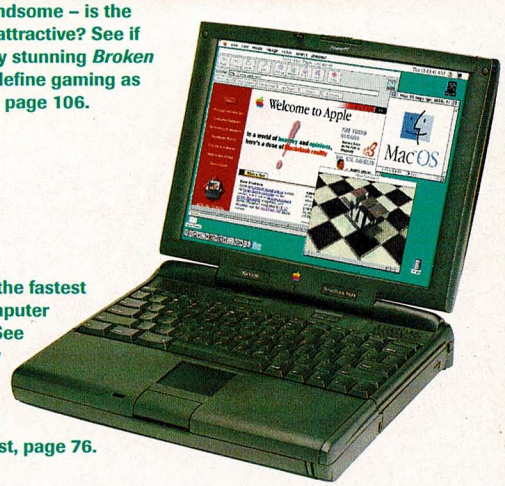
Broken Sword 106
F/A-18 Hornet 3.0 108
The Last Express 110
Majestic Alien Encounter 113
Pyst 114

Shareware Central 116
The latest low-cost and no-cost games, utilities and System add-ons from the Internet

One of the essentials for getting connected is a modem – but which are worth buying? We test a range of the latest models on page 70.



The hero's handsome – is the adventure as attractive? See if the graphically stunning *Broken Sword* can redefine gaming as we know it on page 106.

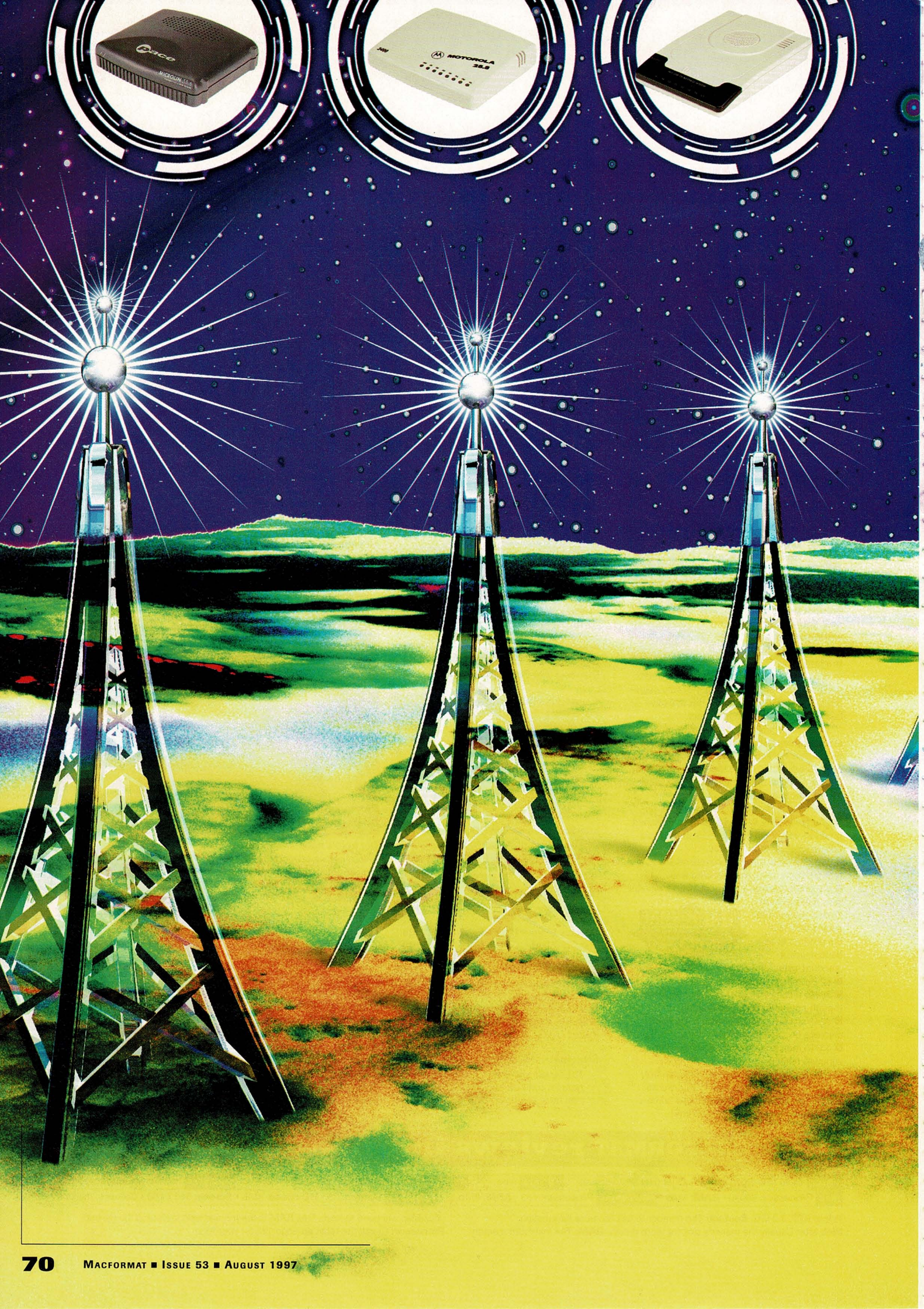


It's touted as the fastest notebook computer in the world. See if Apple's new PowerBook 3400c/240 lives up to the hype in our test, page 76.

The MACFORMAT reviews information bar

PRICE	£4.99 (CD-ROM version) £3.99 (HD Disk version)	ON SALE	Now	CONTACT	Future Publishing on 01225 442244	WEB SITE	http://www.futurenet.co.uk/
MAC	**Processor:** 68030 • **RAM:** 8Mb	POWERMAC	**Processor:** 603 • **RAM:** 8Mb	REQUIRES	**System:** 7.5 • **HD space:** 5Mb • **Screen:** 640 x 480 • **Colours:** millions		

Price: RRP, inc VAT. **Contact:** The number to call for more information.
Web site: Usually the maker's site, for more details. **RAM:** The minimum memory your Mac will need to have. Free RAM is the requirement excluding the System.
Processor: Check the table on page 122 for your Mac.


MOTOROLA

Is anybody out there?

It's good to talk, but it's even better to surf. With a Mac and a modem, the world is literally at your fingertips. Lindsay Bruce looks at solutions for taking your Mac into cyberspace.

Communication between computer systems has always been important. Way back when the mainframe crawled out of the primeval slime, it was necessary to get this computer to talk to other similar machines at different sites and even in different countries. Typically, these computers were used by large companies and government agencies.

Since then, the means and the use of computer communications has changed, and with the explosive growth of the Internet, it's now almost unthinkable to have a computer and not be able to connect to someone else's machine. Our lives are no longer ruled by pieces of paper – the world now runs on the well-oiled axis of computer-controlled information, and who controls it and who has access to it defines who we are.

But let's not get too carried away. You won't find many Macs inside the Pentagon with databases of known subversives or Macs running the Bank of England. Increasingly, though, the Mac is being used as a tool to access information not a million miles from this. You can now access on-line banking to manage your money, and then spend it without moving from your Mac.

You can also search the Internet for your favourite aubergine recipe, join newsgroups for handy gardening tips from like-minded individuals, keep up with the breaking news stories via Reuters and News International on the Web, and send letters around the globe in a few minutes using e-mail. Plus, with video conferencing, you can even *see* and *talk* to anyone in the world through your Mac. All this is possible because of the digital communications revolution. Isn't it about time you got connected?

So what do you need? Well, you've probably already got the main item – a Mac. Next you need a modem, a device that enables your Mac to talk to other computers through standard telephone lines. Then you need communications software, and this usually comes with the modem. Lastly, you need someone to dial up. This could be a mate down the road with an LCII, or it could be an Internet Service Provider who can provide you with a gateway to the Internet and the rest of the on-line world. The key component of all this is a modem; without this, your Mac has no "voice". This issue, we look at the latest modems from some of the major manufacturers and help you decide which one is right for you.

How do they work?

A modem (**mo**dulator/**dem**odulator) is an interpreter that sits between your Mac (a digital device) and the telephone line (an analogue medium). Its job is to translate the digital signal from your Mac into an audible, analogue signal, which can then be transmitted down a telephone line, and vice versa. It's very simple, so why don't all computers have one?

Until recently, it was thought that very few people had any use for a modem, so such devices weren't built into computers. The Internet has changed this perception, but modems and communications standards evolve so rapidly that building a modem into a computer still isn't a widespread practice.

Some Macs such as the 5400 and 6400 Performas and the brand new 5500 and 6500 PowerMacs come with modem cards, but you might not want or need a conventional modem (see the "Going the ISDN route" box on page 75).

Modems are rated in Kbps (thousands of bits per second), and typical ratings are 14.4Kbps, 28.8Kbps, 33.6Kbps, and a new scheme just coming out at 56Kbps. Bear in mind this is *bits* per second, *not* bytes (the measure more commonly used elsewhere in computing). To work out a modem's speed in bytes per second, divide the bps rating by 8 – and then for kilobytes, divide the result by 1,024. So a 28.8Kbps modem transfers data at the rate of 28,800 bits per second, which is about 3.5 kilobytes per second. In practice, built-in data compression ➤

I can't use this!

We've given software requirements for each modem in our reviews. However, with the exception of the Global Village, all of them will work with any Mac after the Plus (which has a 68000 processor), providing you can get hold of a suitable comms package, such as *Microphone Pro* (£89 from MacLine on 0181 401 1111).

Win a modem!

We've got together with US Robotics and CE Software to give you a chance to win one of five US Robotics Sportster 33.6 modems, and one of ten copies of *QuickMail Pro*. Turn to page 146 now!

Our tests

We tested these modems using both an office switchboard and an ordinary direct phone line, and connected to different on-line services. For details, turn to page 75.

bumps this up by around 50% to about 5K per second.

All new modems have fax capability, enabling your Mac to send and receive faxes almost as if you were printing a document down a phone line. (Here it makes no difference whether you have a fast modem – the facsimile standard is set at a maximum of 14.4Kbps.) A newer feature is voicemail. This enables your Mac to work as a digital answering machine, negating the need for yet another piece of office equipment. The advantage is that you can sort through messages on your Mac, deleting any you don't want and keeping the important ones. You can even set up which message to play to the caller depending on the time of day, the date, and, in most cases, the identity of the caller.

Ideally, you want a modem that comes with fax, Internet and comms software. Comms software enables you to connect up to other users, bulletin boards and services such as on-line banking. Make sure you get an easy-to-use comms program, as setting the modem up manually involves using cryptic command strings formed from the Hayes AT command set, a modem communication standard developed by modem manufacturer Hayes. AT commands enable you to tell the modem what communication protocol you want to use to connect to a remote site and at what speed. Ideally, you don't want to have to learn these commands and you want the program and the modem to sort it out between themselves. Granted, die-hard comms junkies love nothing more than fiddling with an AT string, but in this day and age there's no need for it.

All devices that connect to the UK phone system have a REN (Ringer Equivalent Number) rating. This is to prevent overloading the telephone line. Some phones (such as cordless ones) have a REN of 2, as do the majority of fax machines. Check on the bottom of each device connected to your phone line and add the REN numbers up. If they come to more than 4, you're overloading the line. Note: this doesn't apply to ISDN lines, which can take up to eight devices.

The 56,000-bit question

You may have heard about the new 56Kbps modems arriving on the market and causing a stir. It was once thought that 33.6Kbps was as fast as modems would go because of the inherent limitations of analogue telephone lines. The problem is that beyond 33.6Kbps, the noise induced in analogue wiring starts to swamp the data signal. However, engineers have found a way round the problem. Most people are now on a digital telephone exchange with only the connection from their house to the exchange being analogue. This is classed as a semi-digital connection, and along the analogue cable's relatively short distance, it's possible to push up to 56Kbps without drastic signal degradation. As long as your Internet Service Provider (ISP) has a purely digital connection to its local exchange, you're laughing all the way to the FTP site. If not, the modem won't be able to establish a 56Kbps connection and will plump for a lower transfer rate.

However, at the time of writing, most ISPs weren't providing 33.6Kbps modems at their end, let alone 56Kbps. The other problem is that there are two competing 56Kbps schemes: US Robotics' x2 technology, and Rockwell's K56flex. An international standard will probably not be established until next year, and in the meantime modem manufacturers are opting for one scheme or the other – and needless to say, they're incompatible. At present, there's wide support for K56flex among modem manufacturers such as Hayes, Global Village, and Motorola, but x2 seems to be favoured by service providers. In the UK, AOL, Cable Internet, CompuServe, UUNET Pipex, and Virgin Net are just a few ISPs committed to x2 technology.

If you're thinking of buying a 56Kbps modem, check your local ISP first, to see if they can support the modem you've chosen.

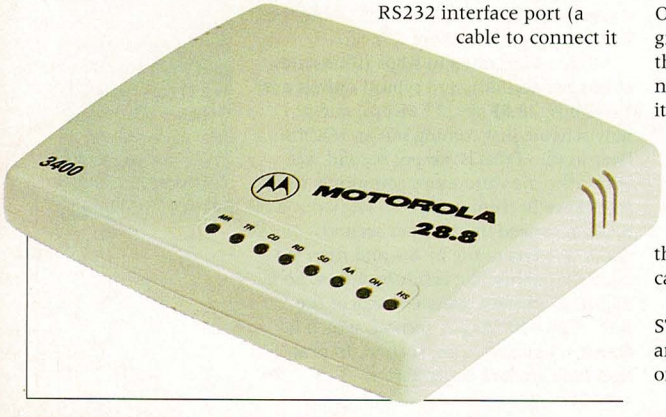
PRICE	Around £118	**ON SALE**	Now	**CONTACT**	Motorola on 0118 984 1075
WEB SITE	http://www.mot.com/				
SUPPLIED SOFTWARE REQUIRES	Any Mac or PowerMac • **RAM:** 4Mb • **System:** 7.0			**WARRANTY**	Five years

Motorola 3400 Pro

We first looked at this modem way back in MACFORMAT 39, when we awarded it a Classic rating of 90%. But how does it fare over a year later, alongside newer, faster modems?

The 3400 is a 28.8Kbps fax modem, and it comes in an inconspicuous grey plastic case (160mm wide, 135mm deep, and 35mm high). An array of eight status LEDs line the top, giving the impression that there's a complicated box of tricks within. The question is, do you really need all these indicators?

Around the back is the standard RS232 interface port (a cable to connect it to your Mac's serial port is supplied), a power on/off switch, power connector for the external power supply (included), a port for connecting it to your telephone line, and a through-socket for plugging your telephone into. The modem doesn't have voice capability, so there's no microphone. Motorola is running a scheme called "Tidal Wave" to upgrade 28.8 and 33.6 modem owners to 56K as soon as units become available. So, it's worth bearing in mind that this modem will take you into the next standard.



The Motorola 3400 Pro comes with one of the best setup guides we've seen. On a floppy disk is an installation guide, graphically showing you how to connect the modem to your computer. Unfortunately, it's somewhat PC orientated, but it is very easy to follow.

Motorola didn't think to extend this philosophy to the printed manual, which gets ever more technical and difficult to follow the further you read. There is a troubleshooting section, though, and this is of some help if you can't get the 3400 to work first time.

Bundled with the 3400 is an edition of STF Technologies' *Fax STF*, a fax sending and management program. This lacks only one or two features from the retail version, such as fax forwarding (the ability to dial in to your Mac and get it to forward received faxes to a machine near you). You also get *Microphone LT*, a communications program which is easier to use than the ageing *ZTerm* and has a less bewildering array of functions, though it is still largely based on a text terminal window reminiscent of the Commodore Pet. Surely in this day and age we don't need to see AT commands displayed on screen.

The 3400 was fiddly to set up and it wasn't entirely happy with our internal phone system. However, once it got going, it was fairly reliable and fast, although on noisy telephone connections it took ages to load some documents. For example, it happily downloaded our test file from a BBS in 1 minute 13 seconds, but failed to connect to our AOL site.

Although this is in a modem's nature, we felt the Global Village Teleport dealt with the line better. Overall, the 3400 is a good bet if you're looking for a cheap modem, and the promised upgrade (no details on what it may cost yet) is a compelling bonus.

Motorola 3400 Pro

Features	**80%**
Ease of setup	**87%**
Documentation	**79%**
MF rating	**82%**

PRICE	£149	ON SALE	Now	CONTACT	US Robotics on 0800 225252	WEB SITE	http://www.usrobotics.com/
SUPPLIED SOFTWARE REQUIRES	Any Mac or PowerMac • **RAM:** 2Mb • **System:** 7.0					WARRANTY	Five years

US Robotics Sportster Voice

The Sportster is housed in a charcoal grey case (160mm wide, 110mm deep, and 35mm high), with strange looking curves on the top and bottom. It's designed to sit flat or on its side, and a small stand is built into the case for this. Oddly, the label for each port is printed on the underside of the case. This means you initially keep turning it over to find out how to adjust the sound volume.

The front of the case has eight status lights (most of which we can't see a use for), plus a microphone for recording a voicemail message. On the left is the volume control and a power on/off switch. On the back is the data connection, power supply jack, telephone through socket, line connection, and a socket for connecting it to external speakers.

US Robotics' new x2 technology will soon enable you to upgrade this 33.6Kbps modem to 56Kbps – we'll bring you details on pricing and availability.

The Sporster comes with *MacComCenter*, a data communications, voicemail, and fax program. It looks and feels much like other comms programs, and as with the others there's a confusing array of options for setting up your modem and downloading files. To be fair, *MacComCenter's* interface is more graphical than *ZTerm's* and is easier to use. Still, it's a long way from making the modem a transparent device. The fax side is pretty standard, with an address book that you can export, or you can import a new one from an existing contact manager or database. However, you can't fax on the fly; you have to select the fax driver in the **Chooser** before faxing, but there is a handy drag-and-drop fax applet for your Desktop. Voicemail is handled in much the same way as faxes, the difference being that you can specify how many voicemail boxes you want.

MacComCenter comes with a thick manual, which takes you from the basics to the dreaded AT commands. It's comprehensive but 60 pages too long.

The Sporster had problems detecting a dial tone on our internal telephone system, but it had no trouble with a direct line. Here, it was fast and very reliable. It downloaded our test file from a BBS in 1 minute 13 seconds and the AOL file in a mere 1 minute 52 seconds. This isn't a benchmark test, but we were impressed at the transfer rate, given it was peak time and a noisy line. The Voice is a great modem, but it doesn't hide the complexity behind comms very well, which is why it just misses out on a Classic award.

WIN a US Robotics Sportster Voice 33.6 modem – see page 146

US Robotics Sportster Voice

Features	90%
Ease of setup	80%
Documentation	78%
MF rating	**85%**

PRICE	£163	ON SALE	Now	CONTACT	Frontline Distribution on 01256 868008	WEB SITE	http://www.globalvillage.com/
REQUIRES	GeoPort-equipped Mac (that is, Performa 630, Quadra 650, Quadra 660AV or Quadra 840AV, or any PowerMac) • Recommended for fax software: 68040 processor, 8Mb RAM minimum					WARRANTY	Five years

Global Village Teleport 33.6

We looked at the Teleport 33.6 back in MACFORMAT 51, but we've included it here for the sake of comparison.

The Teleport is a compact, grey affair (135mm long, 75mm wide, and 25mm high) with a single connection cable that plugs into a GeoPort-equipped Mac. It draws its power from the GeoPort, so it doesn't need a cumbersome external power supply. But this means you need a GeoPort-enabled 68K-based Mac (660AV, 840AV, Quadra 650 or Performa 630) or a PowerPC-based Mac to use it.

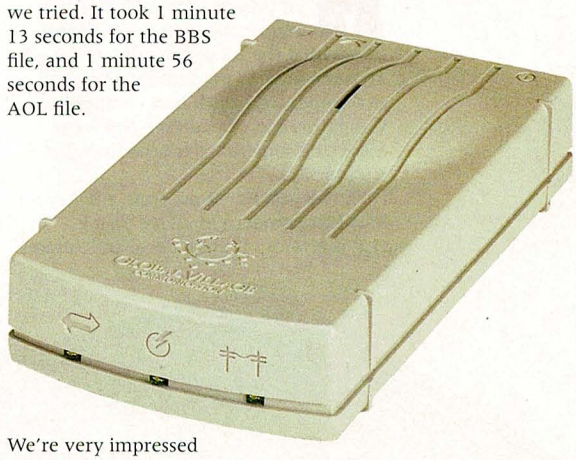
It's easy to get running – you just plug it into your Mac, install the software and off you go. The case has three LEDs on the front: connection open, power and data transfer. Two ports on the back provide the telephone line connection and a through socket for your phone. Both cables are supplied and the software distinguishes between voice and data calls. The Teleport isn't a voicemail modem, so there's no microphone. As yet, the Teleport isn't upgradable to 56Kbps.

On a floppy you get *GlobalFax* and the comms program *ZTerm*. The fax software is basically a **Chooser** Extension, which enables you to fax from any application using a keyboard shortcut. It also displays a modem status bar in the menubar, along with a pop-up menu from which you can abort the fax at any time, even when in a different application.

ZTerm is less impressive. While it's a capable program, it's complex and baffling if you're new to all this. It's based around a single status text window, which soon fills up with bizarre modem commands, making it look like DOS, the old PC operating system. *ZTerm* has been around for years and it shows.

On a separate CD, you get *GlobalTransfer Lite*, which does the same job as *ZTerm*, but is much easier to use. However, this is a 30-day demo, after which you can't use it to upload anything; it costs £30 to get the full version. You also get a BT Internet connection bundle, and this includes Microsoft's *Internet Explorer 2.1*, *StuffIt Expander* and *MacPPP*, which you need to dial into your Internet Service Provider.

Setting up the Teleport is a doddle compared to some of the other modems. The documentation is good – it's understandable, if not absorbing. Once on-line, the Teleport is smooth and fast and it had no trouble with any of the phone lines we tried. It took 1 minute 13 seconds for the BBS file, and 1 minute 56 seconds for the AOL file.



We're very impressed with the Teleport, but we reckon Global Village should dump *ZTerm* and bundle the full version of *GlobalTransfer Lite*.

Global Village Teleport 33.6

Features	81%
Ease of setup	85%
Documentation	80%
MF rating	**83%**

PRICE	£175 (Street £118)	ON SALE	Now	CONTACT	Contact Pace on 0990 561 001	WEB SITE	http://www.pacecom.co.uk/
SUPPLIED SOFTWARE REQUIRES	Any Mac or PowerMac • **RAM:** 4Mb • **System:** 7.0			WARRANTY	Two years		

Pace Microlin 33.6

The Pace Microlin 33.6 is remarkable for the fact that it's the only modem on test that's made in the UK. The case is similar to the Motorola 3400's, but it has a larger, boxier appearance (measuring 157mm wide, 130mm deep, and 40mm high) and is charcoal grey rather than cream.

The design of the Microlin has been kept basic, with two LEDs on the front indicating power and on-line, plus data connection, telephone line port, power on/off switch, power supply socket, and the telephone through connection at the back. The last is a standard BT jack, which you'll find on the end of your telephone cable. This means you can plug your telephone straight into the modem without replacing the cable. Sadly, though, the modem isn't upgradable to 56Kbps.

The documentation is succinct – Pace has opted for quality not quantity. The manual is specifically for the Mac, and it takes you through connection and software installation. There's a brief troubleshooting section dealing with common problems. The good thing about this manual is that it doesn't overload you with cryptic AT commands that you'll probably never use.

CompuServe Internet software is supplied, and this gives you ten hours' free on-line time. This is stingy as many ISPs are offering free 30-day trial periods. The fax and comms programs included come on one floppy disk and get installed at the same time. The installer even checks which port the modem is connected to and supplies you with an installer log, so you know what was installed and where. Very thoughtful.

The fax software is *Delrina Fax Lite*, which is a straightforward fax package offering the usual features, such as fax log, address books, and automatic fax receive. A nice addition is "Fast Fax", which enables you to drag documents onto an icon on your Desktop (rather like Desktop printing) and simply type a telephone number into the resulting dialogue box. Aladdin Software's *SIT-comm* is a basic comms package, which again is based on a single text terminal type window. It's an uncluttered program that's nice and easy to use, and you'll proabably be on-line in a few minutes, even if you're a beginner.

Again, we had trouble connecting the Pace to our internal telephone system (it failed to recognise the dial tone), but setting the modem to dial regardless of dial tone sorted this out, and we were surfing within minutes. It was just as fast as the other modems, downloading our BBS file in 1 minute 14 seconds, and the AOL file in 1 minute 53 seconds.

The Microlin 33.6 offers no-fuss features if you're a novice home user, but you can get a more capable package with better software at this price. If you're a comms guru or want voicemail capability, you'd do better to look elsewhere.

Pace Microlin 33.6

Features	**74%**
Ease of setup	**82%**
Documentation	**78%**

MF rating 77%

PRICE	£199	ON SALE	Now	CONTACT	Hayes on 01252 775577	WEB SITE	http://www.hayes.com/
SUPPLIED SOFTWARE REQUIRES	Any Mac or PowerMac • **RAM:** 4Mb • **System:** 7.0			WARRANTY	Five years		

Hayes Accura 33.6

Hayes has been making modems for years and is probably the biggest name in the business. It invented the AT command set, the set of commands all modern modems use to communicate with host computers. Given this sort of pedigree, we were expecting something special from the Accura 33.6...

Unlike past Hayes modems, the Accura 33.6 has a modern moulded casing (127mm wide, 178mm deep, and 30mm high), with something of a retro feel (you'd half expect to see it in a *Star Trek* film). It's around the same size as an A5 notepad and sports a series of red status lights on the front – something of a Hayes trademark. On the back is the data connection, power on/off switch, line connection, and a through-port for your telephone. Since it's a voice modem, it has a built-in speaker on the top and a microphone at the front. Hayes also has a £99 all-inclusive policy of upgrading your modem to 56Kbps as soon as units become available.

In the box is a wealth of software and documentation relating to PC-compatible computers, but only a token mention of the Mac. True, the instructions for connecting to your Mac are concise and easily understood, but out of the 56 pages in the manual, only one is specific to the Mac, and it's along the lines of "Connect the Accura to the serial modem port on your Macintosh." Where are the software installation instructions, troubleshooting, and features list?

The software supplied is *SuperVoice 1.0*, a fax, voicemail, and communications program. It's reasonably capable but not terribly intuitive and lacking in some basic features, like being able to send a fax in the background – your Mac is locked out until the fax has been sent.

A three-page fax took just over five minutes to send in our test. And it gets worse – there's no faxing on the fly. You have to select the fax application in the **Chooser** instead of holding down a key combination when you select **Print** from the **File** menu. Overall, *SuperVoice* is clumsy, lacking in features and rather PC-ish, and the manual reveals that it's the 1995 version!

Overall, Hayes is to be congratulated for updating its hardware, and it is a big improvement on previous designs. Having said that, in our tests the Accura was the slowest, downloading our BBS file in 1 minute 20 seconds, and the AOL file in a lengthy 4 minutes 42 seconds. (Bear in mind that this is not a benchmark test, only a real-world sample, but it is likely to be representative.) Sadly, the software and manuals are still lacking. At nearly £200 the Hayes Accura is a very expensive option, especially given the poor software and documentation that comes with it.

Hayes Accura 33.6

Features	**72%**
Ease of setup	**79%**
Documentation	**74%**

MF rating 74%

Going the ISDN route

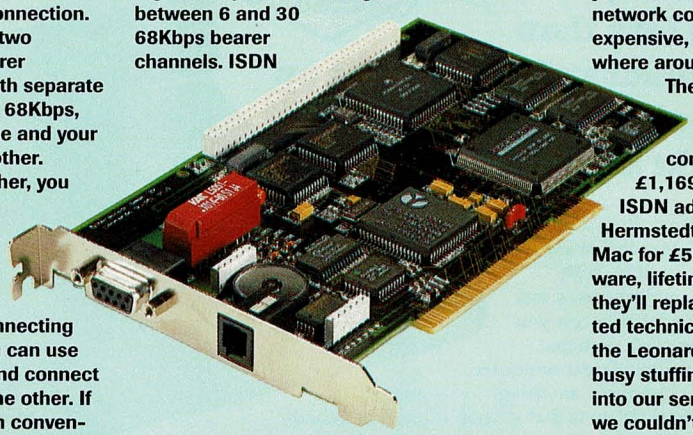
ISDN (Integrated Services Digital Network) is a faster alternative to buying a modem. ISDN is a purely digital medium and therefore faster, quieter, and more reliable. It works like this: over the last few years, British Telecom has been replacing the old analogue-switched telephone exchanges with high-speed digital versions. These are linked together with high-speed digital connections – usually fibre optic based. But the majority of connections between homes and the local exchange are on the old analogue wiring. An ISDN connection bypasses this with a fast digital pipeline to the heart of the exchange.

What you actually get into your home or office is a new type of telephone connection. A basic ISDN two-line comes with two 68Kbps connections known as bearer channels (B channels for short), with separate phone numbers. Each is capable of 68Kbps, so you can connect your Mac to one and your telephone and fax machine to the other. Alternatively, if you link them together, you can have one 128Kbps channel for high-speed data transfer.

ISDN is used primarily for point-to-point file transfers and business ISP connections, but more and more home users are connecting up. With an ISDN line installed, you can use one 68Kbps line for data transfer and connect your telephone or fax machine to the other. If you want to be able to connect with conventional modems, cards are available that have analogue modems built in.

British Telecom offers a range of options for ISDN connection. For a basic low-usage line, the installation fee is £199 and the quarterly charge is £130 (including £90 worth of calls per year for the first two years). For a standard usage line, the installation fee is £400 and the quarterly rental is £113, although you don't get any call discounts. The fast-start option installation fee costs £680, with quarterly rental at £130, £650 worth of calls in the first year, and £210 in the following two years. Calls are charged at the same rate as an ordinary telephone line.

For large companies, BT offers ISDN 30. This is a fibre optic connection to your local digital telephone exchange and offers between 6 and 30 68Kbps bearer channels. ISDN 30 has a £600 installation fee and £100 per bearer channel rental per quarter.



Hermstedt's Leonardo SL card offers blistering speeds of up to 128Kbps via an ISDN line. Best of all, it's available for both PCI and NuBus Macs.

To connect your Mac to an ISDN line, you need an ISDN card or adaptor; the adaptor connects to your Mac's serial port just like a modem would. In this case, though, the limiting factor is going to be how fast your Mac can pump data through this connection.

An ISDN card is a better solution because it plugs directly into your Mac's data bus via a NuBus or PCI slot (which you use depends on which Mac you have). This means you'll get the fastest possible transfer rate from your Mac to the ISDN card, and you won't tie up your serial port, which could be used for a network connection or printer. ISDN cards are expensive, with basic cards costing somewhere around £1,000.

The one shown here is the Leonardo SL from Hermstedt, which is available for NuBus or PCI, and comes with a built-in fax module for £1,169 (street price of around £950). The ISDN adaptors are generally cheaper, and Hermstedt offers the Adante adaptor for any Mac for £582. Both come with comms software, lifetime warranty (if it dies at any time they'll replace it within 24 hours) and unlimited technical support. Sadly, we couldn't test the Leonardo SL as Future Publishing was busy stuffing extra fibre optic connections into our server room at the time of writing, so we couldn't get access to an ISDN line.

For more details, contact Hermstedt on 0171 242 4060 or visit its Web site at **http://www.hermstedt.com/**

How we tested them

We tried all of the modems on an internal office phone line (the type on which you have to dial "9" to get an outside line), and on a normal direct telephone line. Only the Global Village Teleport worked first time on the internal line – we had to disable the dial tone detect feature first for all the other modems.

It's worth noting that most modems will have a problem with dial tone detection because the tone varies according to the area of the country you're in, how noisy the line is, whether you're going through an internal telephone network, and – it seems – the phases of the moon.

Modem communications is still one of those areas that's a bit hit or miss as far as a good connection goes, and this is largely down to the remnants of the old analogue telephone system. However, as modems get faster, even relatively new comms systems are struggling to keep up. The point is, you just have to be patient.

To test each modem, we downloaded a 250K file from a Bulletin Board Service, and a 430K file from MACFORMAT's AOL Web site (see MACFORMAT 50 for details on how to connect to AOL in the UK and the software you need to do it). It's important to stress that the times quoted in the reviews are not intended as benchmarks and you shouldn't consider them as such. Times are given merely as typical transfer rates that you can expect in real-world conditions. **MF**

Modems at a glance

Modem	Motorola 3400 Pro	USR Sportster Voice	Teleport 33.6	Pace Microlin 33.6	Hayes Accura 33.6
Price	Around £118 (no RRP)	£149	£163	£175 (street £118)	£199
Speed (Kbps)	28.8	33.6	33.6	33.6	33.6
Fax	Yes	Yes	Yes	Yes	Yes
Voice	No	Yes	No	No	Yes
Warranty	5 years	5 years	5 years	2 years	5 years
56Kbs upgrade	Yes* (K56flex)	Yes (x2)	No	No	Trade-in for £99
Contact	Motorola on 0118 984 1075	US Robotics on 0800 225252	Frontline Distribution on 01256 868008	Pace on 0990 561001	Hayes on 01252 775577
Web site	www.mot.com/	www.usrobotics.com/	www.globalvillage.com/	www.pacecom.co.uk/	www.hayes.com/

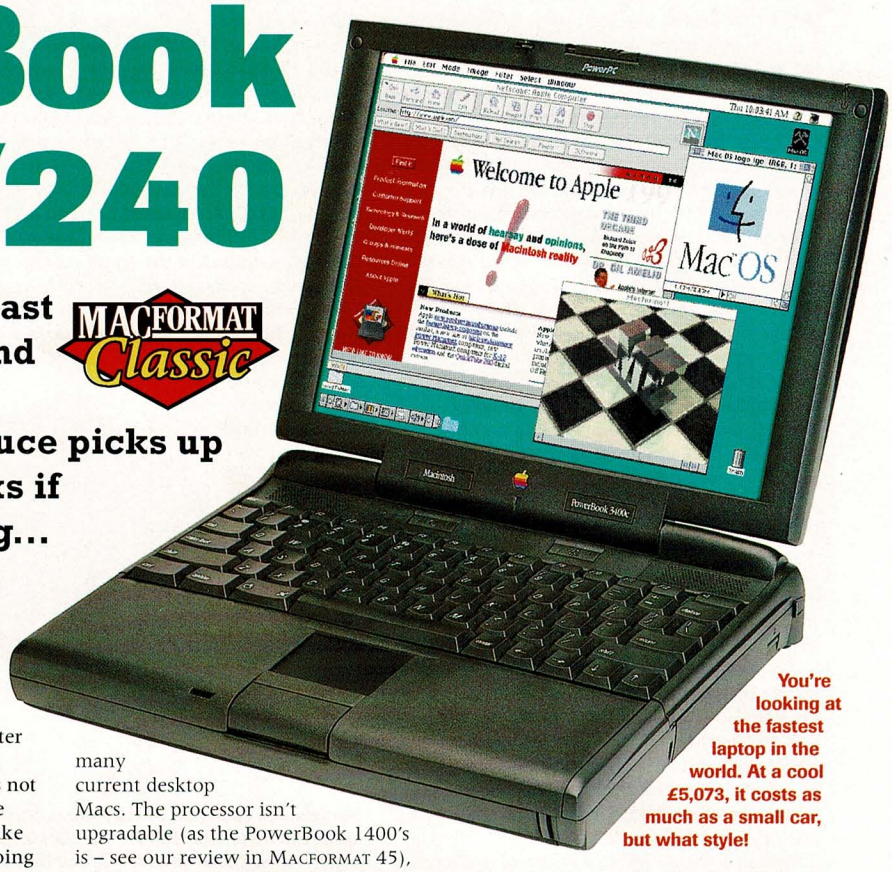
* Motorola is running a scheme called "Tidal Wave", with the intention of upgrading existing 28.8 and 33.6 Motorola modem owners to 56K technology when an international standard is agreed upon. Alternatively, you can opt for an ISDN adaptor, which provides a 128Kbps connection through BT's digital network. For more details on Tidal Wave, contact Motorola on 0800 973266.

PRICE	ON SALE	CONTACT	WEB SITE	WARRANTY
£5,073	Now	Apple on 0800 127753	http://www.apple.com/	One year

PowerBook 3400c/240

They've saved the world at least three times in the last year and they cost a million less than Schwarzenegger. Lindsay Bruce picks up the latest PowerBook and asks if Hollywood was right all along...

MACFORMAT Classic



You're looking at the fastest laptop in the world. At a cool £5,073, it costs as much as a small car, but what style!

What do you use your Mac for? Word processing, DTP, maybe games and multimedia? It probably cost you a couple of thousand, perhaps more. A Mac is a truly great computer and you can do just about anything with it; the only problem is that it's not very portable. A PowerBook, on the other hand, is a Mac that you can take with you, in the car, on the train, going to a meeting or on holiday. Great, except that it isn't powerful enough to run all software, the screen is tiny, and the batteries keep running out. Well, you can't have everything. Or at least, that *used* to be the case. It's not now.

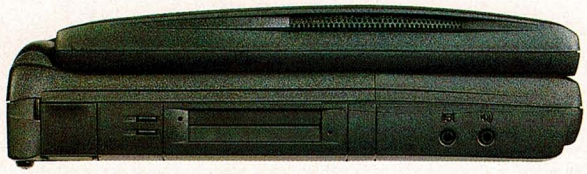
The 3400c/240 is Apple's latest addition to its still-much-sought-after PowerBook range. The 3400 series is aimed mainly at higher managerial staff, travelling reps and well-to-do technology junkies. The range consists of three models (the second number refers to the clock speed of the processor): the 3400/180, 3400/200, and the 3400c/240 (reviewed here). The basic 180 model costs £3,542 without a CD drive or Ethernet fast networking; with both of these it weighs in at £3,846. The 200MHz version costs £4,374 and comes with 32Mb of RAM and Insignia Solutions' *SoftWindows*, so you can run PC applications on it. The top-of-the-range 3400c/240 costs £5,074, but it's a highly refined piece of kit – the BMW of Macs. And as such, it has some very special features under its bonnet.

The 3400c/240 is built around a fast 240MHz 603e processor, the same as in many current desktop Macs. The processor isn't upgradable (as the PowerBook 1400's is – see our review in MACFORMAT 45), which is a drawback, but this is outweighed by its many other features.

I can't afford that!

If the 3400 series is somewhat beyond the range of your wallet, you might want to look at the 1400 series:

- 1400cs/117, no CD: £1,074.
- 1400cs/117 16/750 with CD: £1,287.
- 1400cs/177 16/750 with CD & StyleWriter 2200: £1,499.
- 1400ce/133 16/1Gb with CD: £2,207.



A view of the 3400's left side shows off its curves and the PC Card ports. Under the panel on the left is the ADB port.

Stylish curves

The first thing that strikes you about the 3400 is its curves. Unlike older models, it has a curved lid to accommodate both its 12.1-inch screen (compared to the 1400's 11.3-inch screen) and, believe it or not, a sub-woofer speaker! This is ported each side of the lid and, combined with the stereo speakers above the keyboard, gives a much improved sound over the 1400 and an impressive bass range.

The screen is a backlit active matrix LCD (Liquid Crystal Display), which means it's flicker free, you can work in low light conditions and it has a wider viewing angle than its passive matrix cousins. It supports both 800 x 600 and 640 x 480 resolutions, and is a dream to use – the best LCD screen we've seen yet. However, it still suffers from typical LCD problems: greys have a blueish tinge to them and the colours change as you move your head. But such niggles are far less apparent than on previous PowerBooks or other LCD screens.

In addition to having one of the fastest processors in the world, the 3400 boasts a 3Gb internal IDE hard drive, 12x speed CD-ROM drive, 16Mb of RAM (expandable to 144Mb), a 256K Level 2 cache, and 1Mb of Video RAM – enough to display 256 colours on a 1,024 x 768 monitor. And all this in a case 11.5 x 9.5 inches in size and weighing a mere 7.4 pounds with the CD drive installed!

The 3400's case is packed with ports and bays. On the right-hand side there's the battery compartment and a drive expansion bay. The 3400 accepts drive modules from both the 5300 and 1400 series PowerBooks, so you can plug in optical, Zip, and hard drives made for these machines. It comes with a 12x speed CD-ROM drive module and a floppy drive, which are hot-swappable. This means you can change your drive without shutting the PowerBook down, as long as there isn't a disk in the drive at the time. A locking mechanism on the bottom prevents accidental removal of the module. There's a plastic holder you can fit in the bay instead of a drive, for safer transportation of your PC Cards.

Get connected

On the back is an IrDA-compliant infrared port for remote connection to a network. Simply put two PowerBooks back-to-back and you can transfer files from one to the other at a rate of 230K per second, with no physical connection required. Also on the back, under a pop-down cover, are a 10Base-T Ethernet port, combined printer and modem port, reset switch, PowerBook (small 25-pin) SCSI port, and a VGA monitor port. The 3400 supports video mirroring, meaning you can drive a monitor or an LCD projector for presentations directly from this port. There's no Mac monitor port, though, which is probably because of the

Inside the 3400. The chassis is made from a magnesium alloy, so it's very light but strong. To the right is the 12x speed CD drive, and also pictured is the lithium-ion battery pack (above).

3400's physical size, but an adaptor is included in the box, so you can easily hook it up to your existing Apple monitor.

On the left side of the 3400, under a small tab, is an Apple Desktop Bus (ADB) port for connecting devices like a keyboard or mouse. This is easier to access than the ADB port on the 1400, but having it on the left is more awkward for right-handers. There's no room for it on the right though! Also on the left are the PC Card slots for plugging in modems, graphics cards and other PC Card expansions – two Type II cards or one Type III.

There are ports for external microphone and speaker, but the 3400c/240 has a mic built-in inconspicuously below the Apple logo, and stereo speakers beneath metal grilles on either side next to the lid's hinges. There are manual sound volume and screen brightness controls in the middle.

Tapping away

The keyboard is standard with 78 keys, including 12 Function keys. The **[caps lock]** has a built-in LED (Light Emitting Diode), which lights up when it's in effect. This sounds good, but in practice you don't notice it because your hands obscure the LED. As a whole, the keyboard isn't too bad, but the action is spongy and the layout takes some getting used to because the keys are packed into a tighter area. These points apply to all portable computers, though, and this is better than average.

There's only one **[command]** key (as on older Mac keyboards), which means you spend the best part of a day hitting **[enter]** and **P** instead of printing out a document before you remember to use your left thumb instead of your right. Two small buttons on each side pop the PowerBook's feet out, tilting the whole unit for a more comfortable typing position.

Like the 1400, the 3400 uses a trackpad instead of a trackball. There's a button for clicking and dragging, or you can "click" by simply tapping the pad. The **TrackPad** Control Panel enables you to turn tapping, double-tapping, and tap-dragging on or off. It works reliably, but you may get sick of accidentally clicking and dragging stuff.

You have the option of running the 3400 from its mains transformer (the same type used with PowerBook Duos, which Apple proudly proclaims the most reliable it's ever produced), or from the lithium-ion battery pack that comes with it. Battery life depends on several factors, including drive usage and processor load, but Apple reckons the battery will last between two and four hours.

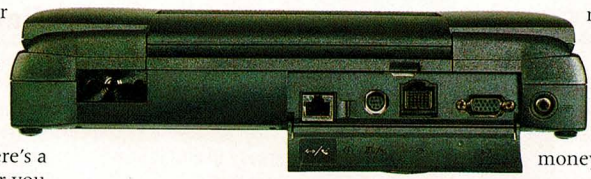
Our tests confirmed this, and the 3400 ticked along happily for three hours on its battery running *QuarkXPress* – this review was written on it. Plugging it into the mains automatically recharges the battery in around an hour and a half. If you wish, it will also automatically switch the PowerBook from energy conservation mode to full power, which means the hard drive doesn't spin down so often and there's a longer delay before the whole unit goes to sleep. You specify all these settings in a Control Panel.

Most noteworthy among the bundled software (see margin note) is the *Apple Location Manager*, a neat Control Panel that enables you to configure the PowerBook's settings – date and time, networking, IP settings, file sharing, sound volume, default printer, and Extensions Manager sets – for different physical locations and switch between them with one click. You also get a brilliant Web browser called *WebWhacker*, which automatically grabs everything off the Web sites you visit, saving it on your hard drive for off-line viewing. This is very handy if you're on the move and don't want to rack up mobile phone charges.

Unfortunately, getting inside the 3400 requires a special hexagonal tool, which you're unlikely to have lying around. This means that memory expansion can only be done by an engineer, which is a drawback. The internal PCI slot is taken up by the Ethernet card, but we can't think of anything you might want to fit in here that you don't already have or can't add via a PC Card instead.

Performance-wise, the 3400c/240 is incredibly fast. It zips through startup in no time at all, and applications fly along at blistering speed. We found it more than capable of doing anything you'd do on a desktop machine – producing presentations, laying out pages in *XPress*, and even doing a spot of 3D rendering. In performance tests using *MacBench 4.0*, the 3400 came out nearly three times as fast as the 5300ce/117, Apple's previous top-end PowerBook. A year ago, the 5300ce had a street price of nearly £4,700. For not much more, at three times the performance, with features to match a top-spec desktop Mac, the 3400c/240 really is good value for money.

The PowerBook 3400 is designed to be a portable office, and it succeeds with distinction. It's also a portable communications centre, entertainment system, multimedia powerhouse and all-round impressive machine. It's not difficult to see why Tom Cruise, Jeff Goldblum and Val Kilmer have all been seen using PowerBooks in recent movies. If you've got the money, this is a fabulous buy. **MF**



The 3400's ports are hidden under a flap at the back. An Ethernet port is standard on all 3400 models except the basic 3400/180. A modem is not fitted as standard – but Apple encourages dealers to bundle one as an extra, so do shop around.

Software

All PowerBook 3400 models come with System 7.6, *Apple Internet Connection Kit* (which includes *Netscape Navigator, Eudora, NewsWatcher* and a 30-day trial with Pipex), *Claris Organizer, WebWhacker* and *Apple Remote Access* for connecting to a network via a modem. The 3400/200 is available with the PC emulator *SoftWindows* as well.

PowerBook 3400c/240

Gorgeous, well designed and well made, extremely fast, and packed with features. Not cheap, but real value for money.

Features	**94%**
Ease of use	**90%**
Documentation	**92%**
Value for money	**94%**

MF rating 93%

Testing, testing...

We tested the PowerBook 3400/240 using *MacBench 4.0* with a basic set of System 7.6 Extensions. Included are results from a range of desktop Macs for comparison – Power Computing's PowerBase 240 (see MACFORMAT 51) uses the same 603e processor running at the same clock speed. Results are expressed as a percentage compared to the PowerMac 6100/60, *MacBench's* reference system. The higher the percentage, the faster the Mac performed.

PowerMac 6100/60	CPU	100%
	FPU	100%
PowerBook 5300ce	CPU	116%
	FPU	128%
PowerBook 3400/240	CPU	334%
	FPU	305%
PowerBase 240	CPU	309%
	FPU	320%

PRICE	£573.40	**ON SALE**	Now	**CONTACT**	Disc Direct on 01223 507705	**WEB SITE**	http://www.discdirect.com/
MAC	**Processor:** 68040 • **RAM:** 4Mb	**POWERMAC**	any • **RAM:** 4Mb	**REQUIRES**	**System:** 7 or greater •		

ONE Pro 4x/6x CD-Recorder

MACFORMAT Classic

Whether you want to make your own backups or dabble in designing multimedia, this CD recorder is leading the way in disc DIY. What are you waiting for? Get recording!

7.6 alerts!

Apple CD-ROM 5.3.1, which comes with Mac OS 7.6, is not fully compatible with *Toast Pro 3.0.5* and the Yamaha CD mechanism which the ONE drive is based on. This means that some functions such as Mount CD-ROM and playing audio CDs might not work. However, version 5.3.3 of Apple CD-ROM, which is included with the Mac OS 7.6.1 update, fixes the problem.

The UK version of Mac OS 7.6.1 update should be out by the time you read this and be available for download from http://www.euro.apple.com/uk/

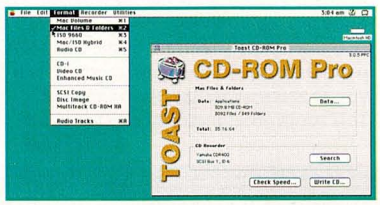
With CD-ROM drives getting ever cheaper and faster, it was inevitable that recordable CD drives would follow. CD-ROM drives are now standard issue on all new Macs, except for some PowerBooks, so if you make a CD, you can guarantee that there will be a huge number of people who can use it. So, why would you want one?

A recordable CD drive is very handy if you're in the multimedia business, where CD-ROM is now the standard method of distribution, but perhaps the best use for a recordable CD drive is for making backups. The fact that you can't record over a CD once it has been recorded makes it the ideal medium for backups because you can be sure that your precious data won't be deleted.

Rushing to the call of all potential CD producers comes ONE Technologies' Pro External drive. It uses the Yamaha CDR 400t 4x CD mechanism, and is different from many of its competitors because, although it writes at quad speed, it has a six-times read speed. This means that it spins the CD six times faster than an audio CD player.

The six-speed playback, combined with the generous 2Mb cache, helps to give you trouble-free recording while reducing the time it takes to make a CD. In tests, making CDs with up to 650Mb of data took under 20 minutes.

ONE Technologies provides everything you need to make the CDs, including a SCSI cable, SCSI terminator, power lead and a blank recordable CD. You also get a copy of either Astarte's excellent *Toast Pro 3.0.5* CD recording software for the Mac or Ahead's *Nero*, a similar program for Windows. Alternatively, you can have both applications for an additional £25.



***Toast Pro 3.0.5*, provided with the ONE Pro drive, adds drag-and-drop simplicity to making a CD, even in different CD formats.**

This option is particularly useful if you ever need to work with a PC.

Making a CD is simplicity itself. The *Toast* software enables you to drag and drop folders or volumes into the main *Toast* window. From here you just click on the **Write CD** button. *Toast* enables you to make CDs in a variety of different formats, including Video CD, Audio CD and Hybrid CD, the last of which works on both Macs and PCs. Once you've used the CD supplied, expect to pay in the region of £5 per recordable CD. This makes CD one of the cheapest storage solutions you can buy, at under a penny per megabyte.

ONE Technologies produces a manual for SCSI drives, and this shows you how to connect the drive to your Mac and does a good job of explaining all the jargon. There is also a manual for the Yamaha CD mechanism and one for the *Toast* software. The manuals are well written and should help you to get up and running within about ten minutes. Just in case you have any problems with the drive, you get a one-year (return-to-base) guarantee and telephone support.

The drive has a number of advantages. It's extremely fast and can double up as a fast CD-ROM drive. The software is quick, easy to learn and flexible, plus everything you need, from cables to a CD, is provided. The drive is also well protected with a clever box design that only requires cardboard to keep the drive safe. This protection is important because the laser in recordable CD drives is prone to damage.

It wins no prizes for being square and grey, but the ONE Pro drive conceals a reliable and fast mechanism for a good price.

Minor quibbles

While the drive is very well built, it's let down by a couple of minor factors. The case is quite large and doesn't win any points for style. Furthermore, while infinitely superior to the hassle of using a caddy system, the tray mechanism is very flimsy indeed.

The drive is competitively priced and compares favourably with many other CD-Recorders from manufacturers such as Yamaha. You might find a few cheaper recordable drives from companies like Formac, but the ONE Pro should last for years, thanks to its build quality and the tried-and-tested Yamaha CD mechanism it uses. The price may seem trivial anyway if you plan to make CDs regularly. Avoid the much slower, albeit cheaper, dual-speed drives and opt for this if you can afford it. **JONATHAN FERMAN**

ONE Pro External 4x/6x CD-Recorder

This drive gets a Classic award for its speed, versatility and price. If you want a fast CD-Recorder, put this one at the top of your list.

Features	**90%**
Ease of use	**92%**
Documentation	**92%**
Value for money	**90%**
MF rating	**90%**

PRICE	£269	ON SALE	Now	CONTACT	Olympus UK on 0800 072 0070	WEB SITE	http://www.olympus-europa.com/

Olympus 230 PowerMO II

Fancy some reliable, portable, "practically indestructible" storage for your Mac at an affordable price? We test a new 230Mb drive from Olympus.

The Olympus 230 PowerMO II is not the optimum drive for speed, but it's reliable and is ideal if you're after long-term storage solutions.

Magneto-optical drives are ideal for long-term data storage. First, you can expect an MO cartridge to last for 50 years – longer than any other storage medium. Second, cartridges are almost indestructible, unlike hard drives, which can easily be damaged if you drop them. Third, they are re-writable, unlike CD-ROMs.

The most common MO drive is the 5.25-inch, typically storing between 1Gb and 2.6Gb of data. The Olympus 230 PowerMO II, however, is a compact 3.5-inch drive, each cartridge storing 230Mb.

The drive has a well-designed, stylish black-coloured case and is small enough to fit in a briefcase – so it's great if you travel a lot with a PowerBook and need a reliable and portable drive to keep your data secure. It can be connected to a Mac or a PC, and you can use it either horizontally or vertically, with the supplied stand. The stand too is well designed, with space for storing two cartridges alongside the drive unit.

There are two 25-pin SCSI ports at the back of the casing – they're now commonplace in the portable market because of their small size. A SCSI cable is supplied for connecting the drive to your Mac. If you have any other SCSI devices, you can connect them with a 25-pin-to-25-pin SCSI cable, using the drive's throughport.

A good feature of the PowerMO II is its internal SCSI terminator and SCSI ID selector. With most portable drives, you are given the choice of only one or two SCSI ID numbers for the drive to be set to, limiting your options if you want to connect more than a couple of SCSI devices. The Olympus drive boasts a neatly concealed ID selector switch on the side of the case which can be set from 0 to 7, and a switch for enabling the internal terminator or disabling it to minimise the risk of problems if another device on the SCSI chain is internally terminated. However, you can only set the SCSI ID using a special tool which comes with the drive – an unnecessarily fiddly way of doing things. A power button is now a rare feature on portable drives, but there is one on the PowerMO II. There is also an eject button on the front of the casing, but this is more for the benefit of PC users because the Mac automatically ejects the cartridge when you drag its icon to the **Wastebasket.**

Crystal clear

Clear documentation is supplied with the PowerMO II, with a step-by-step guide to connecting and installing the drive and a convenient trouble-shooting section. The manual contains information for using the drive with either a Mac or a PC, and there's a small reference sheet boasting clear and simple screenshots showing you how to install the driver.

The driver software supplied is *Formatter One Pro* by Software Architects – virtually standard with drives these days. Installation is extremely fast and simple – an installer places the required Extension in your System Folder. *Formatter One Pro's* interface is friendly and should appeal to you if you're a novice; and yet, at the same time, it also boasts more advanced features such as partitioning and media verification, should you want them.

Loading the cartridge in the drive is rather awkward. The mechanism is very stiff and you have to push the cartridge back into the drive a long way. You get a 230Mb cartridge with the drive, so you can use it straightaway. (Oddly, the cartridge isn't formatted for Macs, but this only takes a few seconds.) The older style 128Mb cartridges are also compatible with the 230 PowerMO II, but unfortunately the newer format 3.5-inch 640Mb cartridges are not.

In our benchmark tests, the Olympus drive performed very well. It's well under half the speed of a hard disk drive, but it did prove faster than expected, probably because of the 256K cache, which speeds up data transfer. Typically, small capacity MO drives score around 25% to 30% the speed of a hard drive, so the PowerMO II is ahead of its class. Even the bigger, faster ONE Technologies 2.6Gb MO drive (reviewed in MACFORMAT 51) came in at just 54% of the speed of a hard drive.

Judged by the benchmark results, the Olympus 230 PowerMO II should be fine for day-to-day tasks such as opening and saving your documents. However, in our real-world test, the Olympus didn't perform quite as well. Our test involved copying a 60Mb folder containing files of various size to the drive, and this took just over three minutes with the PowerMO II, as compared with just 35 seconds to copy to the hard drive.

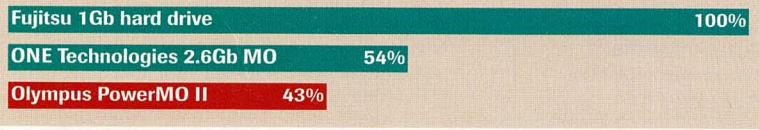
Overall the PowerMO II performs well for a small MO drive, but if you're after a high-speed removable storage medium, Iomega's Jaz drive may be a better choice because of its almost hard-drive-like performance. If, however, you're after reliability and robust long term storage of your data at an affordable price, then the Olympus PowerMO II is a solid drive and an ideal solution. **NIC RODGERS**

Drive on...

The original Olympus 230 PowerMO drive scored a Classic rating of 91% when we tested it in MACFORMAT 43. The faster MicroNet Jaz drive scored 94% in the same issue. If you missed it, turn to our back issues service on page 112.

The results

We carried out our benchmarking tests using *MacBench 4.0* on a Umax Pulsar with 65Mb of RAM. Percentages are a comparison to the reference drive, an internal Fujitsu 1Gb hard drive – the longer the bar, the faster the drive.



230 PowerMO II

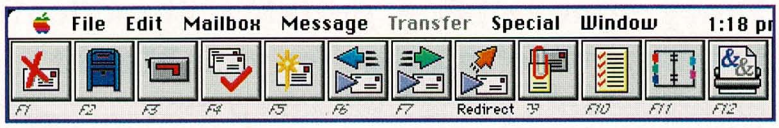
An impressive drive, though not the fastest we've seen. Ideal for safe long term storage.

Features	**71%**
Ease of use	**83%**
Documentation	**80%**
Value for money	**84%**

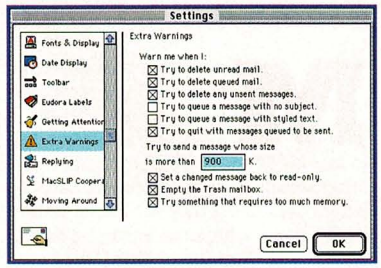
MF rating 80%

No stamp required

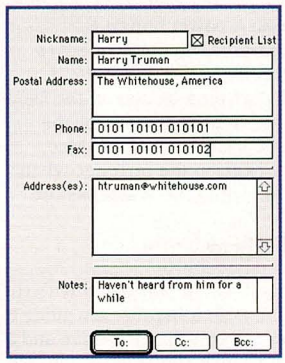
The wonders of e-mail mean that you never have to scrabble around for a stamp and dash down the road to catch the last post again. Rod Lawton breathes a sigh of relief and assesses the field...



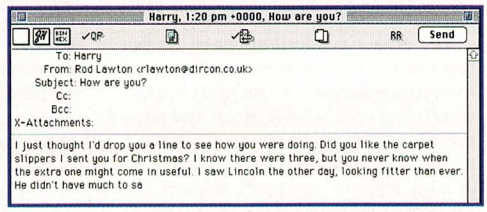
Above: *Eudora's* toolbar welds itself to either the top or side of your screen. The icons can be large or small and can be mapped to your keyboard's Function keys.



Right: Worried that you might do something stupid with your new e-mail software? *Eudora* enables you to set up warnings for just about everything.



Left: *Eudora's* address book can store much more information than its rival programs, including your contact's postal address and any sundry notes you want to make.


Harry, 1:20 pm +0000, How are you?
Send
To: Harry
From: Rod Lawton <rlawton@dircon.co.uk>
Subject: How are you?
Cc:
Bcc:
X-Attachments:
I just thought I'd drop you a line to see how you were doing. Did you like the carpet slippers I sent you for Christmas? I know there were three, but you never know when the extra one might come in useful. I saw Lincoln the other day, looking fitter than ever. He didn't have much to sa

Above: *Eudora's* message window is a bit basic-looking, and its icons are less than obvious.

Pardon?

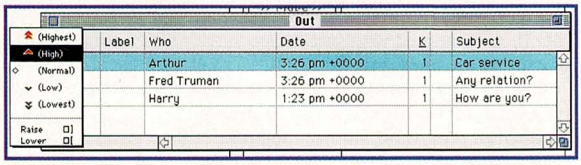
"If the new nickname has the same name as an existing nickname, a prompt is displayed asking if you want to add the selected names to the existing nickname or replace the existing nickname with the new selection." Excerpt from the *Eudora Pro 3* manual. That clears that up, then.

E-mail isn't quite as simple as it first appears. There's much more to it that simply bashing out messages, typing in the recipient's address and pressing the **Send** button.

Indeed, the right e-mail application can act as your personal assistant, sorting your mail, filing it, replying with standard responses where appropriate and making sure that you can find all your important correspondence in moments. The right application will also store a list of all your contacts, so that you never have to go hunting for that elusive e-mail address again.

This kind of power needn't cost a great deal of money. The three commercial programs reviewed here all have free counterparts, albeit with reduced feature-sets. *Eudora Pro 3.0* has a free *Lite* version, *QuickMail Pro* is available in cut-down form as *QuickMail Express* (also free), while Claris has decided to make version one of *Claris Em@iler* free on the launch of the much improved version two.

Although we're concentrating on the "pro" packages in this review, we also checked out the free cut-down versions, so you'll find out how they compare on features. Where we name a program but not the version, it means that both versions support that particular feature.



Priorities are useful not just for getting people to read your messages, but for your own filing system, too. With *Eudora*, you can assign or alter priorities for filed messages so that you know which to deal with first.

Sending mail

How do you make sure people read your messages promptly? One way is to assign a priority. *Eudora* offers priorities from one to five, while *QuickMail* can assign five priorities of its own, ranging from "Urgent" to "Bulk". *Claris Em@iler* offers priority settings, too. In reality, though, they won't necessarily work with your recipient's e-mail software (unless it's the same as yours), and there's no guarantee a high priority will get your messages read any faster. Assigning priorities to incoming messages, though, can be a handy way of filing them and responding to them.

You can also attach a "signature" to outgoing messages; this is just a few lines of text which can quote a telephone number and address, say, or provide information about your company. *Eudora* and *Em@iler 2* enable you to create as many signatures as you like, while the others limit you to just one.

You can send messages to individuals or groups with these programs, and you can also send copies of correspondence to interested parties with "CC" commands, or "BCC" commands if you don't want everyone concerned to know who else has seen a copy. *Eudora* offers **Stationery** files – pre-set forms and messages – while *QuickMail Pro* comes with a **Form Designer,** which enables you to create custom forms for messages sent to other *QuickMail* users.

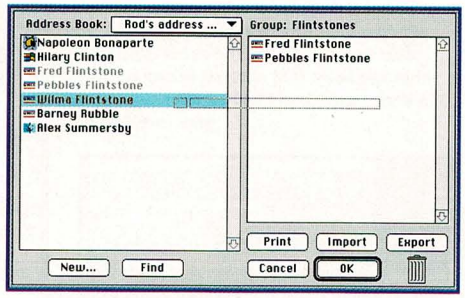
Eudora Pro, QuickMail Pro and *Em@iler 2* all come with spelling checkers, so that you can avoid those embarrassing typing mistakes, and *Em@iler 2* offers the choice of sending messages or saving them in

Where to get them

Eudora Pro 3.0
Price: £65
On sale: now
Contact: Electric Mail on 01223 501333
Web site: http://www.elmail.co.uk/
Mac Processor: any • RAM: 1Mb
PowerMac Processor: any • RAM: 1Mb
Requires System: 7.0 or later

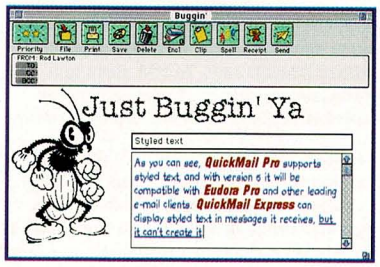
QuickMail Pro
Price: £59
On sale: now
Contact: Computers Unlimited on 0181 358 5857
Web site: http://www.unlimited.com/
Mac Processor: 68020 • RAM: 5Mb
PowerMac Processor: any • RAM: 5Mb
Requires System: 7.0 or later

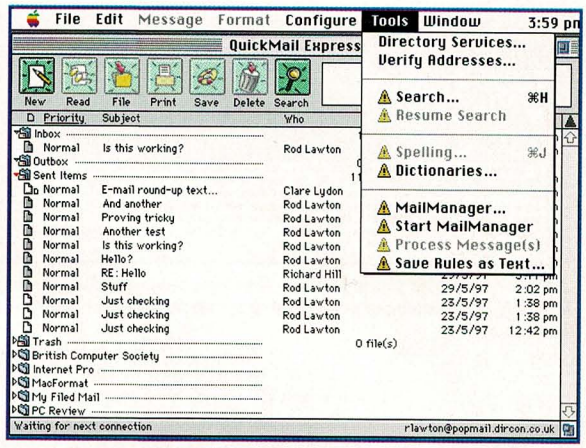
Claris Em@iler 2
Price: £58
On sale: now
Contact: Claris on 0181 756 0101
Web site: http://www.claris.com/intl/uk/
Mac Processor: 68020 • RAM: 4Mb
PowerMac Processor: any • RAM: 4Mb
Requires System: 7.0 or later



Right: Creating groups in *QuickMail* is easy. Once they're set up, you simply drag and drop the recipients into place.

Below: Like *Eudora Pro, QuickMail Pro* can mix fonts, styles and colours in its messages – the recipients need to use compatible software to view them, though.


Buggin'
Just Buggin' Ya
Styled text
As you can see, QuickMail Pro supports styled text, and with version 6 it will be compatible with Eudora Pro and other leading e-mail clients. QuickMail Express can display styled text in messages it receives, but it can't create it!



Right: What do those yellow hazard symbols in the *QuickMail Express* Tools menu mean? They mean that you need to buy *QuickMail Pro* if you want to use these features.

draft form, so that you can finish them off later.

You'll also find that both versions of *Em@iler* offer easier than usual addressing, thanks to their "destinations". They come pre-configured for certain on-line services such as CompuServe and AOL, meaning you don't have to type the full e-mail address when sending messages to people who use these services. This can save a lot of time and help avoid errors.

There's little to choose between these programs when it comes to sending mail. *Eudora Pro* and *QuickMail Pro* are best if you like styled text and setting up stationery, but otherwise it's down to which interface you prefer. *QuickMail Pro* does just sneak ahead with its **Quick-Send** option, though – hit **[command] [control] S** and a message composition window pops up. Write your message, close the window and the message is sent before *QuickMail Pro* quits, enabling you to get back to your work.

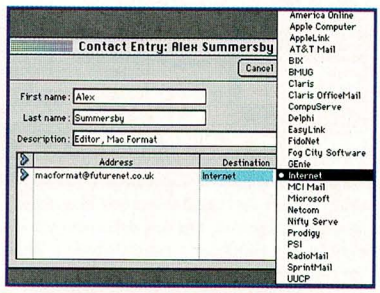
Receiving mail

Likewise, there isn't much to choose between these programs when it comes to receiving mail. They all enable you to check your mail manually or automatically at scheduled times (they have to be left running to do this), and to reply directly, quoting the original message if you like. And they all (with the exception of *QuickMail Express*) have filtering tools to automatically file, delete or reply to messages, based on their contents. They can all forward messages to other recipients, too, although *Eudora* can also redirect them, whereupon they appear to have come directly from the sender rather than via you. *Eudora Pro* can ask recipients for a "Return Receipt" to confirm that they've received the message, but it will only work if their e-mail program supports this feature (*Eudora Lite* does), and *QuickMail* has a similar feature.

All of these programs give you the option to leave your mail on the server, too. Whether this works or not depends on how your server is set up – some have strict limits for the length of time you can keep mail on the server or how much mail you can accumulate.

QuickMail Pro can capture the sender's address from any messages you receive, making it easy to add names to your address book without having to type them in. Both *QuickMail Pro* and *Eudora* can also save messages as text files.

So which one is best? Again, there's little to choose between them. *Eudora* has the most bells and whistles, but it's also more complicated to set up and use.

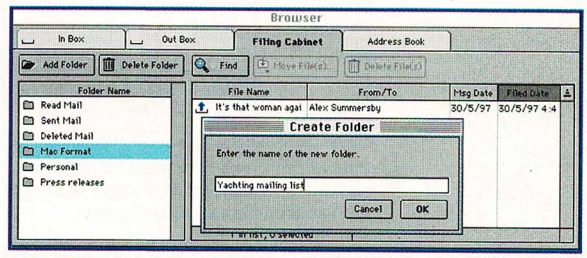


Both versions of *Claris Em@iler* use pre-configured Destinations to speed up addressing. This doesn't save any time if all your contacts have ordinary Internet accounts, though.

Organising your mail

Once you've received mail, what are you going to do with it? Read it, then delete it? Maybe – but you're likely to want to keep some of your more important messages, and that's when you need e-mail software with a decent filing system. It's surprising how quickly you accumulate e-mail messages and how long it takes to sift through them to find the information you want. So what you also need is a program that can search not just the current message for specific text, but all your messages.

You may not have enough time to read all your messages, either, or to file them properly. In this case you need a program that can filter incoming messages, checking to see what's in them and filing them accordingly – even ➤

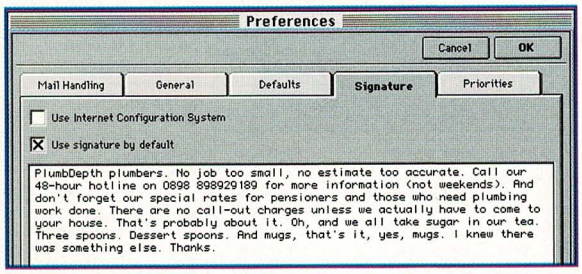


Like *QuickMail Express* and *QuickMail Pro, Em@iler 1.0* only enables you to have one level of folders for storing your mail – you can't nest folders within folders.

Get on-line

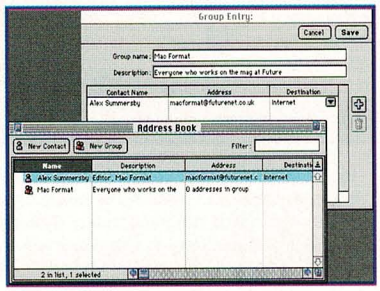
You haven't got an Internet connection yet, and you want to know how to go about it? Our feature (page 34) tells you all you need, but the basics are:

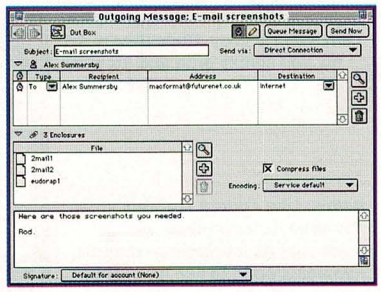
1. A modem. Get the fastest you can afford – 33.6Kbps is currently best.
2. The MacTCP Control Panel – supplied as part of System 7.5 onwards. Otherwise, check with your Internet Service Provider.
3. MacPPP (or FreePPP) – also Control Panels. Not part of the System software, but freely available (see our Cover CD); often supplied by ISPs too.
4. An Internet Service Provider. Phone around and choose one that doesn't just offer the best price but also seems to know a bit about Macs. This will be useful later on because you'll almost certainly need to talk to their technical support desk to get your MacTCP and MacPPP settings just right. See page 42 for a list of some Mac-friendly ISPs.
5. A telephone line. You don't have to get an additional line put in because you can use the one you already have. Many modems have a pass-through socket to enable you to plug a phone into the modem and use it normally while you're not on-line. Alternatively, get a socket splitter from your local DIY warehouse or electronics shop.


Preferences
Cancel
OK
Mail Handling
General
Defaults
Signature
Priorities
Use Internet Configuration System
Use signature by default
PlumbDepth plumbers. No job too small, no estimate too accurate. Call our 48-hour hotline on 0898 898929189 for more information (not weekends). And don't forget our special rates for pensioners and those who need plumbing work done. There are no call-out charges unless we actually have to come to your house. That's probably about it. Oh, and we all take sugar in our tea. Three spoons. Dessert spoons. And mugs, that's it, yes, mugs. I knew there was something else. Thanks.

Em@iler 1 **enables you to attach a signature to your messages, but you only get a choice of one, which you can define in the Preferences window.**

Right: ***Em@iler 2*** **has a neater message window than its predecessor. You can now view attachments at the same time as the message body, and messages can be saved in draft form to be finished later rather than sent immediately.**





Left: Like all the other programs reviewed here, ***Em@iler 2*** **supports groups, enabling you to send the same message to predefined lists of users. To add users to a group, simply drag their names from the Address window on to the Group window.**

assigning them a priority so that you know which messages to read first.

Sound like a dream? Far from it. For a start, all of these programs enable you to set up folders for storing messages. Once you've read a message, you can then file it in the appropriate folder so that you know where to find it again later. *Eudora's* filing system is more sophisticated than most, though, because you can even create folders within folders – *Claris Em@iler 2* is the only other program here that offers hierarchical folders. *QuickMail Express* has the feeblest filing system because it can only handle five folders, each containing no more than 100 messages, while *QuickMail Pro* offers you up to 250 folders with 250 messages in each.

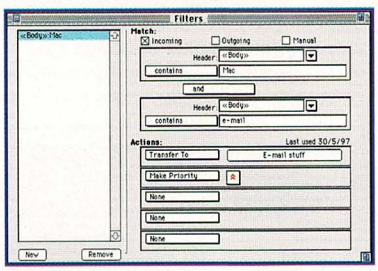
Not all of these programs enable you to search your filed messages for specific text strings, though. *Em@iler 1* and *QuickMail Express* confine themselves to searching single messages, and if you regularly need to look up information in past e-mails this could be a big handicap.

Apart from *QuickMail Express*, all of these programs can automatically filter incoming messages. They will check the name of the sender or the content of the messages for specific text strings, then file the message in the appropriate folder or carry out some other action. With *Eudora* you can assign a new subject to a message, change its priority, redirect it to another recipient, delete it... in fact, you can carry out up to five actions on a single message. *Eudora Lite* offers only a subset of the *Pro* version's available actions, but they're the ones you're most likely to want anyway.

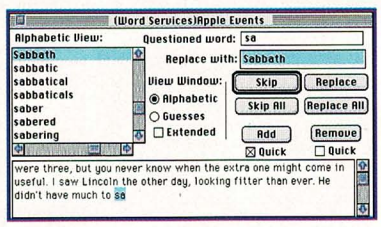
QuickMail Pro offers a more limited set of actions, but they're the ones you're most likely to need: **Print, Forward, File, Delete** and **Reply**. The **Reply** option is useful because it means you can reply to messages with a standard response, such as "Sorry, I'm out of the office all week, but I will reply as soon as I get back." *Em@iler 1's* mail actions are similar, but you can only assign a single action to each message – this has been changed for *Em@iler 2*, which offers a greater range of actions and the ability to apply several actions to a single message.

Connection kit

Claris's *Internet Connection Kit* supplies all the software you need to get your Mac hooked up to the Internet, and it costs £58 or less in the shops. Alternatively, if you buy the *ClarisWorks 4 Internet Edition* (£152), you get *ClarisWorks 4*, the *Internet Connection Kit* and *Claris HomePage* to boot.



Eudora Pro's **mail-filtering functions are second to none. It offers a larger choice of mail actions than** ***Eudora Lite*****, too.**



With ***Eudora Pro*** **(and the other two commercial programs, but not their free versions), you even get a spell-checker. Vital for preventing emmbaras– ... imbarrass– ... er, looking like you can't spell properly.**

Mail formats

E-mail isn't just about sending messages. It's also about enclosing files and pointing to Web sites. How do these programs cope with attached files, and can they display "hot" URLs that the recipients can simply click on to launch their browsers? And can any of them do anything about the dreary plain text formatting of the average e-mail message?

Files must be specially encoded before they can be attached to e-mail messages. The encoding format you choose depends on the type of machine you're sending the enclosure to. (It can sometimes depend on the service your mail is going to be routed through, too.) The complicating factor is that Mac files have data and/or resource forks – these are extra bits of information that make perfect sense to other Macs, but which can confuse PCs and UNIX systems.

The MIME standard is the latest and most robust encoding format and works across all formats, provided the recipient's e-mail software is MIME-compatible. If you're sending files to people without MIME-compatible software, though, you need a different encoding format. BinHex is for when you're sending files to non-MIME-compatible Mac

Free for all?

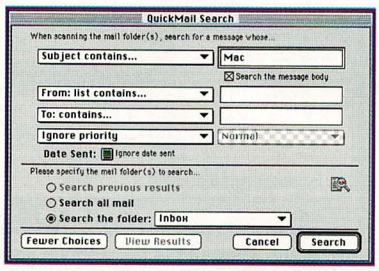
Eudora Pro 3.0, QuickMail Pro **and** ***Claris Em@iler 2*** **all have free, cut-down companion products. You don't get the full range of features provided by the commercial programs, but they do offer a way to try the software out before you reach for the chequebook. And if your e-mail needs are modest, they might be all you need.**

Eudora Lite **is the most powerful of these free programs. In fact, most average users are unlikely to need the extra functions of the** ***Pro*** **version. This makes it quite a bargain (if something that's free can be called a "bargain", that is). The downside is the program's general complexity. Free or not, it's far from ideal for beginners, and its multi-windowed interface isn't going to appeal if you're looking for a neat and simple Desktop utility.**

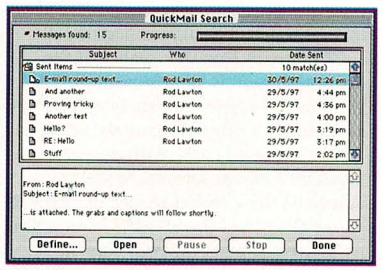
QuickMail Express **is the free companion to** ***QuickMail Pro*****, and it's everything that** ***Eudora Lite*** **isn't. It's clean, simple and very straightforward to use. Unfortunately, the comparison with** ***Eudora Lite*** **works across the board. While** ***Eudora Lite*** **is very powerful,** ***QuickMail Express*** **is pretty weak, offering a much reduced set of tools compared to the** ***Pro*** **version. Indeed, half the menu options and buttons tell you that you'll have to buy the** ***Pro*** **version if you want them to work.**

Which leaves us with ***Claris Em@iler 1*****. Unlike the other two free programs,** ***Em@iler 1*** **was actually sold commercially until the release of version two. This means it's a complete, fully-featured application. It's not as sophisticated as** ***Em@iler 2*** **and it's a bit slower to use (although it's easy for beginners to get to grips with), but it's the best choice if you're looking for both simplicity and features.**

You can try out all three of these programs – they're on this month's Cover CD. They'll give you a taste of the full-blown commercial packages and help you decide on the features you're really looking for.



Like *Eudora* and *Em@iler 2*, *QuickMail Pro* can search through all filed messages for specific text strings or senders...



... *QuickMail Pro* then displays a list of all the messages that match your search criteria, with a preview of the contents.

owners – files are converted into ASCII data, and both data and resource forks are preserved. UUencode is best for non-MIME PC or UNIX systems.

All of the programs reviewed here support these encoding formats. *Eudora Pro* also supports the "text-enriched" MIME standard. This means you can mix different fonts, sizes, styles and colours in your messages. If the recipients are to make any sense of it, though, they need compatible software.

Eudora Lite can't compose styled messages, but it can display styling in messages sent by *Eudora Pro* users. Both programs can also insert and display "hot" URLs in e-mail messages. The software can automatically recognise URLs and display them in the standard blue colour of live links, but if you want to be doubly sure, enclosing URLs in angled brackets forces *Eudora* to format them as links. Both programs also enable you to insert text files into messages, which is useful if the intended recipient can't handle attachments or it's only a small amount of text and not worth enclosing separately.

With *QuickMail*, you're not just limited to sending files. If your recipient is also using *QuickMail*, you can attach Clipboard contents as well as files. You can even send voice messages if you have a microphone and *QuickMail Pro*.

When you send attached files with your e-mails, you'd be wise to compress them first. If you use *Eudora* or *QuickMail* you'll have to do this beforehand, but both versions of *Claris Em@iler* can automatically compress enclosures using *StuffIt*. Of course, to decompress these files, the recipient needs to be a Mac owner, but if the recipient also uses *Em@iler*, the enclosures will be decompressed automatically. Otherwise, they will need to use a utility such as *StuffIt Expander* (in the **Resources** folder on the Cover CD). If you're sending files to non-Mac owners, you need to make sure that you switch off compression when you attach them.

There's really little to choose between these programs. If your primary concern is whether or not they can attach files to your messages using all the common encoding formats, the answer is that they all do. You're really at the mercy of the recipient's computer, their e-mail software and even the servers that handle your message en route, and while 90% of enclosures work without problems, some won't. It's not much of a science – it's more suck it and see.

If you really want to be able to send and view "hot" URLs, both *Eudora* and *QuickMail* can oblige, though *QuickMail Pro's* Clipboard and voice enclosures could prove more useful. Both *Eudora Pro* and *QuickMail Pro* offer styled text, too.

Address books

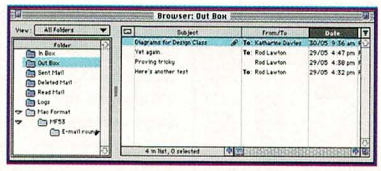
E-mail addresses are a lot harder to remember than telephone numbers, and even if you only ever e-mail half a dozen different people, you'll still need to write their addresses down somewhere. All these e-mail programs come with address books, where you can quickly look up the person you want to contact and dash off a message.

Eudora's address book enables you to add nicknames – type in the nickname and the relevant contact is located. You can also add your own notes to each contact's records if you like. You're not stuck with just one address book, either – you can create different address books for business contacts, friends and so on. And if there's a small number of people you contact regularly, you can add them to the **Quick Recipient List** to speed things up. There's a Group feature, too, so that you can send the same message simultaneously to a number of recipients.

Like *Eudora*, *QuickMail* enables you to set up a number of different address books and groups – a maximum of 250, in fact. Each address book can store up to 1,000 names, which ought to be enough for all but the most rabid professional user. What's especially clever, though, is that each person's address book entry also includes their computer type and enclosure encoding options. Instead of having to set this manually each time you send a message, the correct encoding is automatically chosen when you mail that person.

Both versions of *Claris Em@iler* only offer one address book (let's face it, do you really need more than one?). Individuals are easy enough to find, though – you simply start typing their names and up they pop after you've entered just a few characters. Like the other programs, *Em@iler* enables you to set up groups for bulk mailshots.

The address books in all of these programs work well. Individuals are easy to find and you're unlikely to run out of storage space. *QuickMail* has the edge, thanks to the encoding information you can specify for each person, but *Eudora's* notes field could be useful if you like to assemble information about individuals.



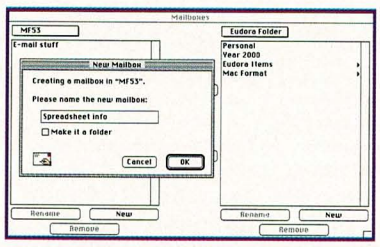
***Em@iler 2's* new browser interface is basically the old program's Filing Cabinet window, with the Inbox and Outbox folders added.**

Ease of use

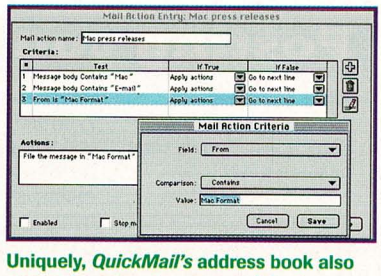
These programs are so similar in features and capabilities that the way they feel to use could prove just as important as their more esoteric capabilities. And although *Eudora Pro* is just about the most powerful program here, it feels cluttered and dated. There are too many windows, the icons are garish and simplistic, and it lapses into technospeak at the drop of a hat. Although it's the perfect e-mail tool for techie experts, it's by no means the best program if you're an executive ➤

QM Pro v1.5

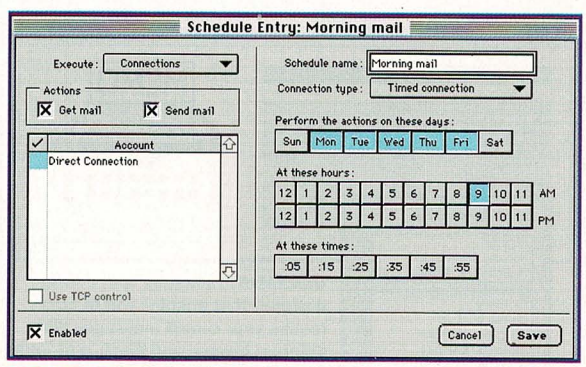
Version 1.5 of *QuickMail Pro* will soon be available. It will be faster, with numerous changes and fixes. Enhancements include Dial-up Networking Support, where the software automatically connects to your mail server and disconnects. The styled text format will be standardised so that it's compatible with *Eudora Pro, Netscape Mail, Microsoft Internet Mail* and other popular e-mail programs. Turn to page 146 for a chance to win a copy of *QM Pro 1.5!*



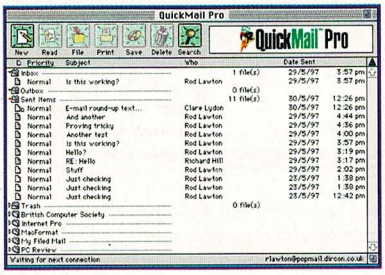
***Eudora Pro* can handle nested folders, but its system for transferring messages from one folder to another is bewildering. *Eudora Lite's* is more straightforward.**



Uniquely, *QuickMail's* address book also stores the computer your recipient uses. Choose the right computer and the encoding options for attached files are set automatically. Neat.



With *Em@iler 2*, you can schedule your connections for certain days of the week and certain times each day. The program has to be left running, though, and it won't automatically disconnect from the server when it's finished – none of these programs can manage that useful trick.



The *QuickMail* window is the simplest and most obvious of the lot. It's easy to drag and drop messages from one folder to another, although you can't nest folders within folders.

or home user just looking for a quick and simple e-mail program.

QuickMail is much better. You read and organise your mail in a single window, which contains your **Inbox, Outbox** and any further folders you've set up for filing mail. You double-click on a folder to open it, and you can drag messages from one folder to another.

Em@iler 1 takes a different approach. The main window has four tabs for your **Inbox, Outbox, Filing Cabinet** and **Address Book.** It's a little more fiddly to move around in than *QuickMail*, but it's still neater and simpler than *Eudora*, and straightforward enough for e-mail novices to grasp.

But this has all been changed for *Em@iler 2*. The tabbed window has been swapped for a Browser, which displays your folders in a pane on the left and their contents in a list on the right. It makes it quicker to view and organise your messages and makes the software quicker to use. It's perhaps a fraction harder to grasp if you're a beginner, but for speed and efficiency it's certainly on a par with *QuickMail*.

For ease of use, then, it's pretty much a tie between *QuickMail* and *Em@iler 2*. *Em@iler 1* is fine if you're a beginner, but ultimately it's slow to navigate around, while *Eudora*, powerful though it is, feels old-fashioned and messy. If these were cars, *Eudora* would be a Land Rover.

Eudora Web site

Eudora actually has its own Web site, where you can find the latest updaters, get technical support and download *Eudora* plug-ins to extend its features. You'll find the site at **http://www.eudora.com/**

Documentation

E-mail isn't the simplest of subjects to explain, and all of these programs offer powerful and sophisticated features that have the potential to make it more incomprehensible still for beginners.

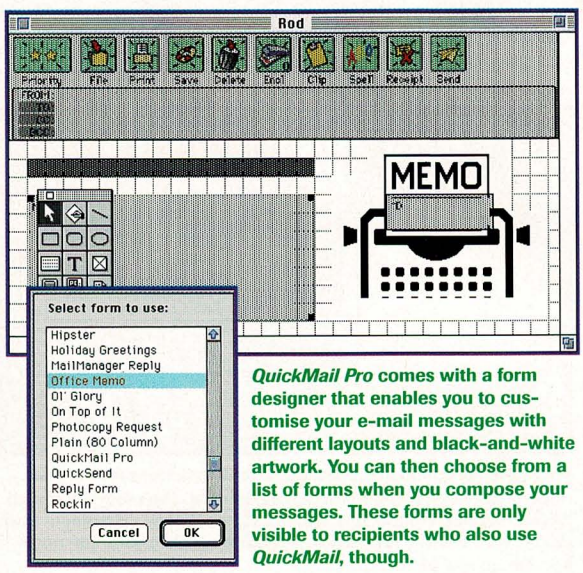
This means that the quality of the documentation is very important. The commercial versions of these applications are sold with printed manuals, while the free versions all come with documentation in Acrobat format. To view this, you need the Acrobat reader (it's on our Cover CD!), and the effect is like reading pages from a book on your screen.

If size is anything to go by, the *Eudora Pro* manual ought to be the best, running to over 200 pages. However, it readily lapses into jargon, and, although it's concisely written, it's not easy for the beginner to get into. Also, while the early chapters form a tutorial for new users, much of the book is given over to technical subjects, including, for example, instructions on setting up dial-up connections to non-standard servers – frightening stuff. *Eudora* is a heavyweight e-mail program designed for people who know what they're doing, and the manual feels as if it's designed with system administrators and techies in mind rather than ordinary mortals.

The *Eudora Lite* manual is a vast 190-page Acrobat file, which soon plunges into the same technical discussions. There ought to be a special bookmark for beginners halfway through, saying "you can stop now", but there isn't.

By contrast, the *QuickMail Pro* manual is more of a booklet. Nevertheless, it tells you everything you need to know about the program as well as offering a simple and direct introduction to the Internet and e-mail, including diagrams. The 20-page Acrobat-format *QuickMail Express* manual is shorter still but just as friendly. The same can be said of the manuals with both versions of *Claris Em@iler.*

If you're an old hand at this e-mail lark and a bit of a wirehead, you'll love *Eudora* and its manual. If, on the other hand, you're a beginner still wondering if you've done the right thing, you need the comforting simplicity offered by the documentation you get with *QuickMail* and *Em@iler.*

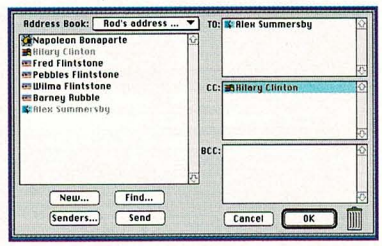


***QuickMail Pro* comes with a form designer that enables you to customise your e-mail messages with different layouts and black-and-white artwork. You can then choose from a list of forms when you compose your messages. These forms are only visible to recipients who also use *QuickMail*, though.**

The best choice?

These programs have more similarities than differences. The best one for your needs will depend as much on which one you like the look of as on what they do individually. *Eudora Pro 3.0* offers most power and flexibility, but it's also the most expensive program here and you have to be technically adept to get the best from it. It's also grim to look at compared to the much slicker interfaces of *QuickMail Pro* and *Claris Em@iler 2.*

These two programs offer 95% of *Eudora's* power but wrap it up in a much neater, friendlier interface. In fact, there's little to separate them. *QuickMail Pro* has a simpler main window and that useful **QuickSend** feature, while *Em@iler 2* has nested folders for a more sophisticated message filing system. Ultimately, though, *QuickMail Pro* comes out the winner, thanks to its blend of powerful tools and simple interface. **MF**



Addressing messages in *QuickMail* is easy – you simply drag and drop recipients from the address book list into the appropriate windows on the right.

Eudora Pro 3.0

Powerful but complex e-mail software that's better suited to technical experts than beginners. Looks a bit dated now.

Features	**95%**
Ease of use	**72%**
Documentation	**71%**
Value for money	**58%**

MF rating 69%

QuickMail Pro

A simple and intuitive interface hides a slick and powerful program. Look out for v1.5.

Features	**90%**
Ease of use	**92%**
Documentation	**89%**
Value for money	**80%**

MF rating 87%

Claris Em@iler 2

A sophisticated filing system and a quicker-to-use interface make this a big improvement over the first version.

Features	**87%**
Ease of use	**90%**
Documentation	**83%**
Value for money	**80%**

MF rating 84%

Posting your e-mails

When you send and receive e-mails, they don't travel directly from one computer to another, any more than conventional letters go straight from your house to the recipient's.

Instead, your outgoing mail travels to your Internet Service Provider's mail server, which then directs it via the Internet to your recipient's mail server, ready to be downloaded the next time they log in. Similarly, the messages you download from your server have arrived via the numerous other mail servers used by the senders. It's the electronic equivalent of the Post Office's sorting offices and mail trains, but a just a little bit quicker. Okay, about a million times quicker, in fact...

MACFORMAT ON AOL

To visit MACFORMAT ON AOL, simply enter the keyword MacFormat.

The Internet can be a confusing and frustrating place. "Surfing" is all well and good, but how do you find the information you really want without spending all your time and money browsing around? Sure, there are search engines aplenty, but even with the best of them you often have tens of *thousands* of "matches" to narrow down even further... But now, MACFORMAT ON AOL is here to help! If you want something for your Mac, whether it's news, reviews, uploads or downloads, you'll find it here. Your suggestions can be posted on the noticeboards and there are on-line chat rooms and much more. It's not just a place to visit, it's an entire on-line community of Mac fans!

MACFORMAT ON AOL is interactive, and it's designed to complement the magazine – following the articles and reviews further, taking your comments on board to provide the information you really want. This is *the* comprehensive guide to directly accessing material for all aspects of the Mac.

To give it that community feel, we've designed it to be like a set of "places" you can visit:

Creative café

The Mac has always excelled at the creative and inspirational, with programs and people that stretch the boundaries of the arts and multimedia. Creative Café will be the place to come for news of the latest *Photoshop* filters, reviews of creative software or a "How to" on a particular art package. What's more, as in **Reader's Corner** on our Cover CD, you can put your art on AOL.

Through your hints and tips, we will produce a resource that's *really* useful. We'll follow up your comments and look at art, design and music on Web pages soon too.

Mac office

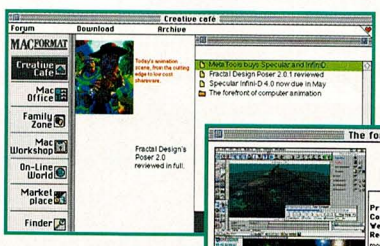
Productivity is a key word in today's working environment, and you want the right software for you whether you're running your own business or part of a big company. What are the best packages for the job in hand? Is it worth upgrading to that latest version? How can you get more from the software you have? These are the questions we will be answering. Whatever your field (databases, get it?), you'll find something of value here!

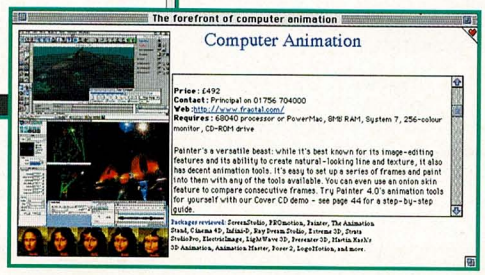
Family zone

Whether you want to download the latest *Marathon* maps, find out which multimedia titles are best for your kids, or read our reviews of the latest releases, it'll all be here, along with hints, tips and pointers to downloads off the Web.

Mac workshop

If you're thinking of upgrading your Mac or buying a new piece of hardware, look here before you buy. With information on specifications, potential problems, value for money and how to get assistance, this area will become an invaluable resource. We'll also be providing technical help and a jargon busters guide, and a searchable buyer's guide is in the pipeline.



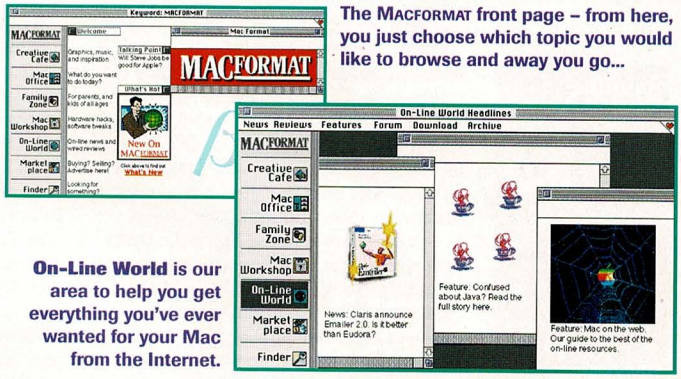

The forefront of computer animation
Computer Animation
Price: £492
Contact: Principal on 01756 704000
Web: http://www.fractal.com/
Requires: 68040 processor or PowerMac, 8MB RAM, System 7, 256-colour monitor, CD-ROM drive

Follow up articles from the magazine, and take them further, launching yourself fully into all the information on the Web.

With links to Web sites, graphics, downloads, news and reviews, it's up to you where you go...

The navigation bar – choose your own e-mail, the World Wide Web, and more.

Welcome to AOL! Your journey starts here. To visit MACFORMAT ON AOL just click on Find and type MacFormat, or if you prefer use the Keyword function.

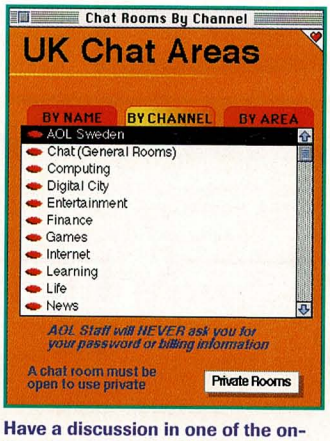


The MACFORMAT front page – from here, you just choose which topic you would like to browse and away you go...

On-Line World is our area to help you get everything you've ever wanted for your Mac from the Internet.

On-line world

Where would you be without the Internet? Sane, perhaps... but as we do the searching for you and look up every aspect of the Mac on the Web (from how to create your own Web page to the latest and the best Mac Web sites), we'll help make using the Net a pleasure. Soon you won't have to spend time downloading software without knowing what it's like – we'll give you a flavour of it here first!



Have a discussion in one of the on-line chat rooms – we'll be arranging interviews here too.

Marketplace

Advertise all your goods here – sell, buy and swap away!

Finder

Our own **Finder** will be up and running soon – the internal search engine for MACFORMAT ON AOL. It will guide you through our ever-growing resources, to find just what you want here and beyond!

AOL is not just a door to the wider world of the Internet. Like its other areas, MACFORMAT ON AOL is a truly interactive service, bringing you not just the Web but also our own multimedia service, and enabling you to interact with others on-line through message boards, discussion rooms and chat services too. You're part of a vast international community; here's the place to join in it! Getting the most from the Internet isn't easy, but this really is the place to start.

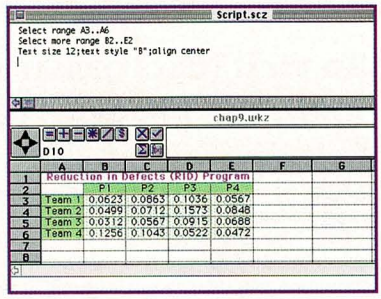
ED HAYNES

The buddy lists enable you to keep in touch with people easily, and keep you informed about which of your friends are on-line. Handy.

PRICE	£464	**ON SALE**	Now	**CONTACT**	Investment Intelligence Systems Corporation on 0171 628 6960	**WEB SITE**	http://www.wingz.com/
MAC	**Processor:** any • **RAM:** 4Mb	**POWERMAC**	**Processor:** any • **RAM:** 4Mb	**REQUIRES**	**System:** 7.1 (7.5 for PowerMacs) • **HD space:** 5Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** CD-ROM drive		

Wingz 2.5

As the demand for spreadsheets continues to grow, Rod Lawton tests *Wingz*, one of the latest number-crunching programs, to see if it makes your data fly.


Script.scz
Select range A3..A6
Select more range B2..E2
Text size 12;text style "B";align center
chap9.wkz
D10
Reduction in Defects (RID) Program
P1 P2 P3 P4
Team 1 0.0623 0.0863 0.1036 0.0567
Team 2 0.0499 0.0712 0.1573 0.0848
Team 3 0.0312 0.0567 0.0915 0.0688
Team 4 0.1256 0.1043 0.0522 0.0472

You can use *Wingz's* built-in HyperScript programming language to write and record scripts for automating routine tasks.

Surprisingly enough, all spreadsheets are not the same. They might all use the same jargon, the same grids of cells, functions, formulae and charts, and they might even all look the same, but they can go about things in different ways.

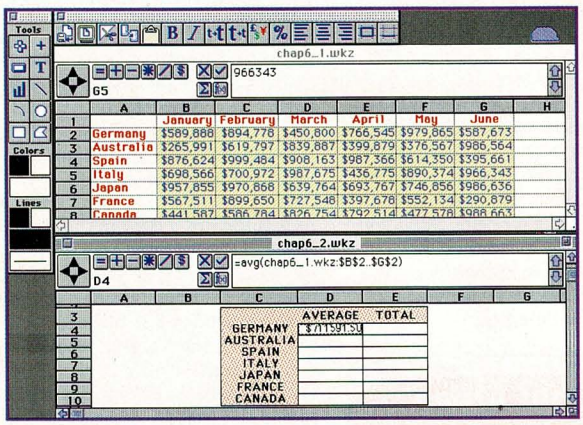
Wingz 2.5 is quite different. On the surface, it's like *ClarisWorks* or *Microsoft Excel*, although the interface does contain some unfamiliar tools and some odd jargon, but that's because this is a product that's available on many different platforms, including the PC and UNIX machines. This immediately makes it more interesting to corporate buyers, who'll want to keep training and support costs to a minimum. If you can install the same spreadsheet application on any computer, life is going to be a lot simpler.

In fact, *Wingz* is very much a business tool. Its price alone puts it outside the scope of home users, and also puts it on a collision course with *Microsoft Excel*, the market-leading professional spreadsheet.

What exactly do you get with a "professional" spreadsheet? What can *Wingz* do that *ClarisWorks* can't? Well, you not only get dozens of specialist functions that you can paste into your formulae as in other spreadsheets, but they're separated into categories like "statistical" and "business", making them easier to find. But one of the biggest differences is *Wingz's* ability to link cells in different documents, an ability it shares with *Microsoft Excel*. For example, you might have a vast worksheet containing your company's entire sales records for the past year. However, your boss just wants a summary, month-by-month, product-by-product. The solution? Simply create a new worksheet with a table of figures in the requested layout, and sub-total the sales figures by setting up links from the cells in your table to the raw data in the other worksheet.

Absolutely?

Data in a spreadsheet is located by cell references. If you alter the data, adding a row, say, "B8" may become "B9". What happens to calculations involving that cell? A "relative" reference updates to allow for this; an "absolute" reference still points to the original cell.



Above: *Wingz* can link cells in different worksheets, so you can summarise detailed and complex information in a new document.

Why pay more?

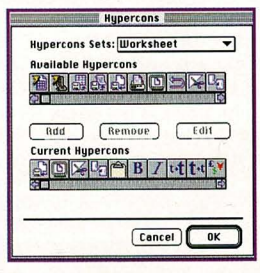
Wingz can create much larger worksheets than *ClarisWorks*, too – 32,768 rows and 32,768 columns, to be exact. And you can select non-contiguous cell ranges, so that if you want to apply the same number format, colour or font to two separate blocks of data simultaneously, you can.

Wingz also incorporates a number of clever ideas, and the on-line help system is a good example. You can browse it via a contents section, use the index or search for specific text. So far so good. But if you see a reference to a menu option, you can try it out without closing the help window. The contents of the window then provide information about the command you've just selected.

There are some handy features for the more experienced user, too. When you drag either of the scroll boxes, a Locator Box appears to show you which row or column you'll be at when you release the mouse button. It's an excellent way of finding specific rows or columns quickly.

And then there's the Navigator Button in the Tool palette, where you click on the relevant arrow to select your direction. However, you don't progress cell by cell; instead, *Wingz* looks for cells containing data and jumps straight to the first of these. When you click the arrow again, it jumps to the last cell which contains data. Click it again, and it jumps to the next block of data... It's an unusual and innovative approach to the problem of navigating through large and complex bodies of data, and it's a real time-saver.

If you're used to spreadsheets, you'll also be familiar with the problems involved in sorting out relative and absolute cell references (see margin note, left).



If you don't like the buttons (Hypercons) on the toolbar, you can replace them or create your own.

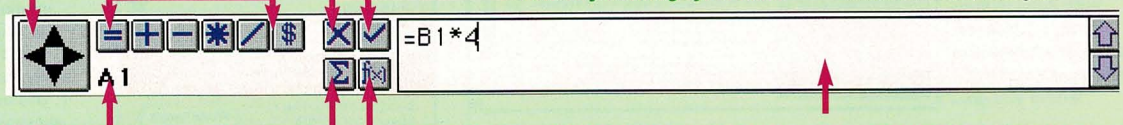
Wingz's Entry Bar

Navigator Button: move quickly through your worksheet.

Operator Buttons: the simple arithmetic operators, grouped here for fast access.

Cancel/Accept Entry Buttons: click the tick to confirm the contents of the Entry Field, the cross if you change your mind.

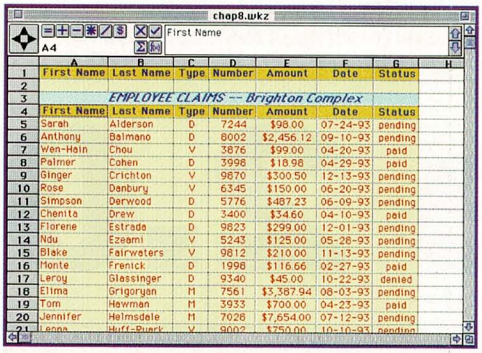
***Wingz's* Entry Bar is equivalent to the Formula Bar in other spreadsheet applications – with a little bit extra, though...**



Cell Reference Button: change cell references in the Entry Field from absolute to relative, and vice versa.

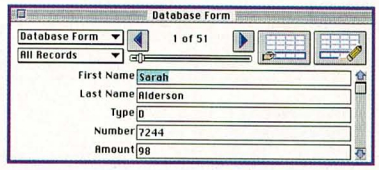
Action Buttons: click the left button to total rows or columns, the right one to choose one of *Wingz's* other in-built functions.

Entry Field: this is where you type your formulae – not just a cramped single line field, *and* it scrolls...



	First Name	Last Name	Type	Number	Amount	Date	Status
1							
2							
3	EMPLOYEE CLAIMS -- Brighton Complex						
4	First Name	Last Name	Type	Number	Amount	Date	Status
5	Sarah	Alderson	D	7244	$98.00	07-24-93	pending
6	Anthony	Belmano	D	8002	$2,456.12	09-10-93	pending
7	Wen-Hsin	Chou	V	3876	$99.00	04-20-93	paid
8	Palmer	Cohen	D	3998	$18.98	04-29-93	paid
9	Ginger	Crichton	V	9870	$300.50	12-13-93	pending
10	Rose	Danbury	V	6345	$150.00	06-20-93	pending
11	Simpson	Derwood	D	5776	$487.23	06-09-93	pending
12	Chenita	Drew	D	3400	$34.60	04-10-93	paid
13	Florene	Estrada	D	9823	$299.00	12-01-93	pending
14	Ndu	Ezeami	V	5243	$125.00	05-28-93	pending
15	Blake	Fairwaters	V	9812	$210.00	11-13-93	pending
16	Monte	Frenick	D	1998	$116.66	02-27-93	paid
17	Leroy	Glassinger	D	9340	$45.00	10-22-93	denied
18	Elima	Grigoryan	M	7561	$3,387.94	08-03-93	pending
19	Tom	Hawman	M	3933	$700.00	04-23-93	paid
20	Jennifer	Helmsdale	M	7026	$7,654.00	07-12-93	pending
21	Leona	Huff-Puerk	V	9002	$750.00	10-10-93	pending

Left: You can use *Wingz* to create databases – tabulate your data using a column for each field and a row for each record. Then (right) define the cell ranges for your data and for the cells which are going to display the results of your searches.



Above: Once you've done this, you can view your data via a database-style form, rather than having to sift through acres and acres of text.

Wingz works with absolute references by default, but if you select the references in the Entry Bar, there's a natty button alongside that cycles through four different options: absolute, absolute rows only, absolute columns only and relative.

Sooner or later, you'll want to print out your worksheet, and here *Wingz* has another trick up its sleeve, in the form of Reports. When you define a Report, you're actually choosing the cell range you want to be printed – the rest of the worksheet is ignored. You can also add a header and footer if you like, plus a bewildering and rather over-the-top range of formatting options, including fonts, colours, frames, shadows and more.

Looking good

Spreadsheets are about more than just number-crunching, though; in most offices they're also used to present data clearly to colleagues and customers. *Wingz* has the usual tools for applying borders, fills and patterns to cell ranges, plus drawing tools for creating lines, arcs, ovals, rectangles, polylines and polygons. It's a bit primitive in this respect, though, but it makes up for it with a wide range of chart types. It's the usual system: you select a range of cells, click the chart button, drag out a rectangle to define the area you want the chart to occupy, and it's created automatically.

The chart types include bar charts, line graphs, scatter charts, and 2D/3D pie charts. You can create "exploded" pie charts simply by dragging the segment you want to draw attention to out of the pie. *Wingz* also offers 3D charts in a variety of formats, which you can rotate to change the angle of view, and you can even arrange the lighting.

What's more, you can add explanations or labels to your worksheet with Text Fields. You can also import and display pictures in EPS, PICT and GIF formats. For example, you might want to display a company logo alongside sales figures you present to distributors, or include a diagram showing how your company is organised. You can export cell ranges as graphics, too, which is useful if you need to provide financial information for company newsletters and the like.

It's in the script

Wingz has a scripting language (called HyperScript), as do *ClarisWorks* and *Microsoft Excel*. You can use it to record a series of routine operations, and you can then run the script independently or assign it to a button on your worksheet.

Alternatively, you could assign your script to a new Hypercon. *Wingz's* Hypercon palette is completely customisable. You can take Hypercons (why not just call them buttons?) away, add them or even create your own, and it's similar in this respect to *ClarisWorks'* customisable palettes and buttons.

But HyperScript goes a lot further than this. It's an entire programming language that underpins *Wingz* and it can automate and customise *Wingz* on many levels. The HyperScript reference section in the manual is 479 pages long, which speaks for itself...

That's not the end of *Wingz's* abilities, though. Like its rival *Excel*, it can also function as a database, and the two programs work in a very similar way in this respect. Each row in your worksheet corresponds to a database record, and each column corresponds to a field. You don't have to plod through rows of data to dig out information, though, because there's a Form dialogue that presents the information one record at a time, like a conventional database. You can use the same window to apply search criteria for isolating specific records.

It all works pretty well, too, though it's a bit clunky and is sometimes confusing compared to a dedicated database application. However, there are advantages to handling your data on a spreadsheet – it can combine data-handling with normal spreadsheet calculations and analysis.

If you own *Wingz*, you may have another reason for setting up databases on your worksheets, too. *Wingz* ships with a program called *Datalink*, is a HyperScript application that retrieves information from an *Informix* database, then pastes the selected information into a *Wingz* worksheet. It's a two-way process, too – you can also manipulate and update the database information from within *Wingz*. In fact this is probably the biggest single reason for choosing *Wingz* over *Excel*, but only if your company uses *Informix* software to store its information.

It doesn't all have to be this complicated, though. Although *Wingz* is a professional-level spreadsheet with some complex and powerful tools, the documentation has been written with beginners in mind. It comes in the form of a 230-page tutorial, and you'll find the relevant tutorial files on your hard disk if you follow the standard installation. This is backed up by a colossal 860-page reference tome and a 220-page manual on using the *Datalink* application. It puts the pitiful tip-of-the-iceberg book you get with the *Microsoft Office* suite (the usual source of *Excel* these days) to shame.

A few hiccups

However, although the documentation is excellent, we had a few problems with the software. At one point we had to quit the application and relaunch it because worksheets weren't displaying properly. We also had the message "Line 1 Invalid Syntax" while we were adjusting Report options. We don't know what it meant and nothing bad seemed to happen.

Judged purely as a standalone spreadsheet application, *Wingz* is not especially powerful, but it is expensive. Yes, it has some very handy features and it's been well thought out, but *Excel* is the better bet. *Excel* has many more tools and functions, and it's the software that everyone else uses. However, in a company that uses Macs, PCs and UNIX machines, *Wingz* is a godsend – an application that runs on all three systems. What's more, if a company uses *Informix* database software, *Wingz* functions not just as a spreadsheet but as a powerful networked information-handling tool, too. **MF**

Modal what?

Using a Mac, you're probably used to "modal" dialogues, where you must hit the **OK** or **Cancel** button before you can get back to the application. *Wingz* displays modeless dialogues, which are like Mac windows – you can leave them open in the background and switch back to the program.

Upgrade deals

Investment Intelligence Systems is offering upgrade deals for owners of older versions of *Wingz* or *Excel*, *Lotus* or *Resolve* until 31 August 1997. Call 'em for more details.

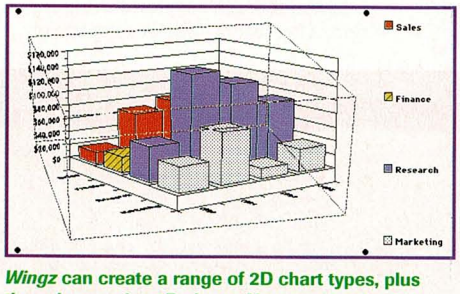
Alternatively...

ClarisWorks' spreadsheet module is just fine for most non-professional uses (contact Claris, 0181 756 0101). The pro-level market leader is *Excel 5* (contact Microsoft on 0345 002000). For something quite different, take a look at the graphical, intuitive *Spreadsheet 2000*, reviewed last issue (contact Softline on 0181 401 1234).

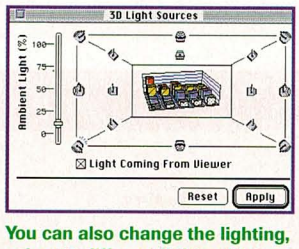
Wingz 2.5

A professional-level database that's aimed more at corporate users. Its real value is its connectivity, not its features.

Features	**81%**
Ease of use	**90%**
Documentation	**95%**
Value for money	**63%**
MF rating	**77%**



***Wingz* can create a range of 2D chart types, plus these impressive 3D charts. You can simply click and drag to change the viewer's perspective...**

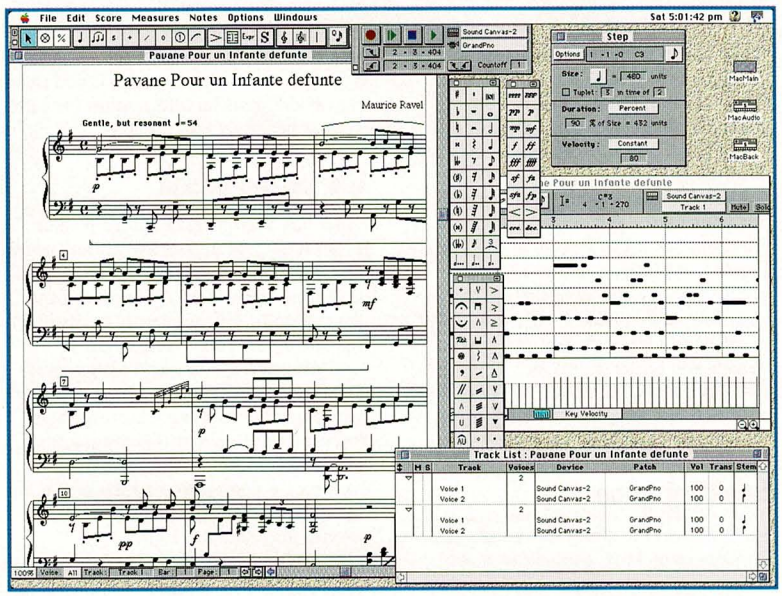


You can also change the lighting, using 12 different lights with two different lighting characteristics, plus you get full control over the level of ambient lighting!

PRICE	£379	**ON SALE**	Now	**CONTACT**	SCV London on 0171 923 1892	**WEB SITE**	http://www.opcode.com/
MAC	**Processor:** 68020 • **RAM:** 2Mb free	**POWERMAC**	**Processor:** any • **RAM:** 4Mb free	**REQUIRES**	**System:** 7.0 • **HD space:** 5Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** MIDI interface and a MIDI device to listen to the music • OMS software (supplied) • printer for printing scores		

Overture 2.0

Whether you want to bang out a lead sheet for your band or produce a professional orchestral arrangement, *Overture* reckons it's got the tools for the job. Ian Waugh discovers it's easy to score...

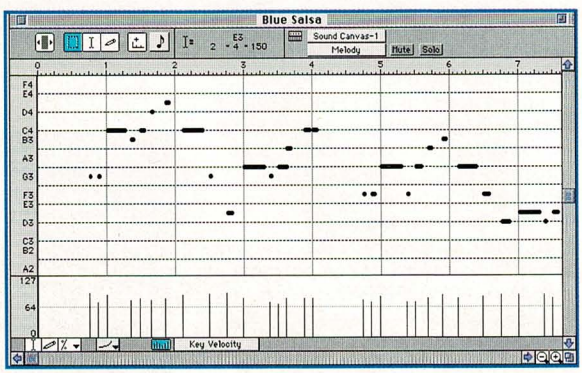

File Edit Score Measures Notes Options Windows
Sat 5:01:42 pm
Pavane Pour un Infante defunte
Maurice Ravel
Gentle, but resonant ♩=54
Track List : Pavane Pour un Infante defunte

***Overture 2.0* can take input from a MIDI keyboard, enables you to tear off palettes for easy editing and it can also play back the score via MIDI.**

Despite the popularity of MIDI, the most common method of communicating musical ideas is still through traditional notation. Although most professional sequencers include scoring facilities, some quite sophisticated, they often fall short of the wider demands of dedicated scoring. Opcode's *Overture*, now in its second incarnation, has a host of features specifically designed to make note entry and the creation of professional-looking scores as easy as possible.

Installation is simple. Like most music software, *Overture* uses hard disk installs as copy-protection. It's an odious and insidious practice – make a mistake and you can lose an install and the ability to run the program. We're not singling out Opcode here; most music software developers use similar systems.

Also, be wary of the System recommendations. They are absolute minimum suggestions which will struggle to run *Overture*. You really need at least a 68030 processor and 4Mb of free RAM. Even though it's not essential, a large monitor is extremely useful too. The code is optimised for use on a PowerMac and you'll see a marked difference in the speed of the screen redraws.



In the Graphic Editor you can see notes on a piano roll display, and edit controller data in the Strip Editor below.

Layout

First of all you need to create the score layout. *Overture* supports 64 staves per system with eight voices per stave, each assignable to a different MIDI channel. You have to select the staves, the clefs, the instrument names, the grouping and so on. It's easy enough to do, but the program includes over 20 templates covering everything from a full orchestral layout, jazz and wind ensembles to choirs and solo guitar.

There is one main toolbar, which you can place anywhere on the screen. It contains over a dozen palettes holding notes, music symbols, dynamic markings, music instructions and so on – these pop up (or down) from the toolbar when you click on them. However, you can also tear them off the toolbar and place them anywhere on the screen, which is ideal if you are entering lots of symbols of a particular type.

Although the program has a wealth of music symbols, if there's one you want that it doesn't have, you can create it and then import it into the program as a PICT file to use just as if it had been supplied.

How to score

Let's run through a typical scoring session. After loading a score template or

Jargon busters

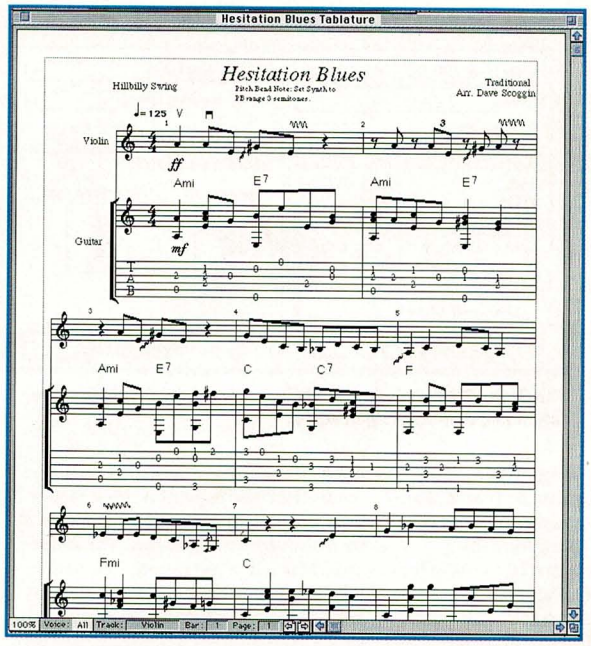
Drum map: the notes played on a MIDI keyboard that trigger drum sounds bear no relation to the notes used in drum notation. A drum map converts MIDI notes to the correct drum notation on the stave.

Stave or staff: a collection of lines, usually five, on which notes are placed. Most instruments only require one stave but some, such as the piano, use two.

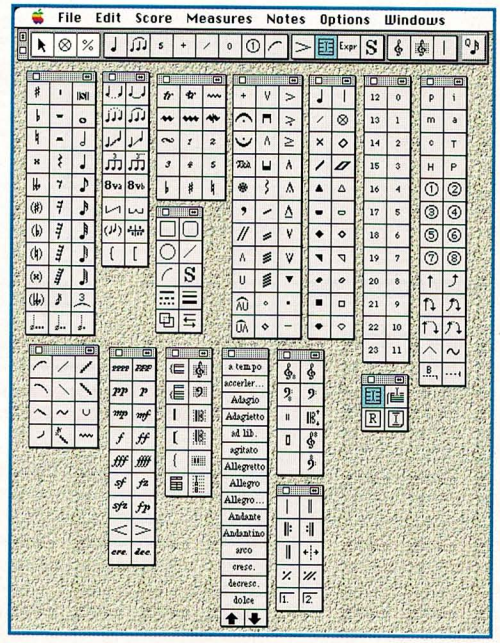
System: a group of staves, joined by a vertical line down their left-hand sides, that are played at the same time.

Tuplet: an odd number of notes played in the same time as an even number of notes. The most common tuplet is the triplet, which is three notes played in the time of two.

Voice: a single line on a track or stave. Many pieces of music have more than one voice per stave – much choral music, for example – and much piano music has two or even three music lines on a stave.



Left: And here's a score we prepared earlier... demonstrating guitar tablature, chord symbols and lots of weird music symbols. The inclusion of guitar tabs is a great new feature in version two of *Overture.*



Right: You can tear all these palettes from the toolbar and place them anywhere on the screen for instant, easy access. This makes it a simple process if you want to enter a group of symbols of a particular type.

constructing your own, you begin to enter notes. Select the first note duration from the note palette and click it onto the required line or space in the first bar. With the **Auto Position** option, it will then be automatically entered at the correct position.

And so you build up the score, with the program placing the notes at the correct positions. However, you can easily move a note and shuffle a music symbol into a new position. If you click directly onto a note or symbol, it's highlighted and you can move it with the mouse or nudge it with the cursor keys – it's extremely easy and intuitive. You can also select groups of notes and symbols for simultaneous editing.

The program includes a drum map, and once you've set it up to suit your instrument, playing notes on a keyboard produces the correct drum notation on the stave. There is also a chord window, which makes it easy to select and enter chord symbols.

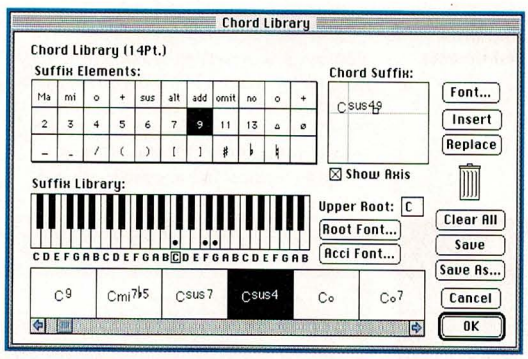
Overture can check the score for incorrect note durations and for notes that fall outside the range of the instruments being used. You may think a bassoon can reach pretty low, but if you enter notes that such an instrument can't play, *Overture* lets you know.

Guitar man

One of the major new features in version two is guitar tablature. A complete palette is devoted to guitar music symbols and markings, and it has a full range of string numbers, finger markings and string bend symbols.

Many objects have handles that you can drag to change their position. This is especially useful for tweaking symbols such as slurs and dynamics, although you can also adjust the position of bar lines. If you're really fussy about spacing, you can activate the **Beat Charts,** which determine how much horizontal space is used by the notes. This is probably more than the average user wants or needs, but it's there if such a desire should arise.

Overture can, of course, import MIDI files and you can enter notes using a MIDI keyboard too, in real time ➤



Using the Chord Library, you can quickly construct just about any type of chord and place it where you want on the score.

What's MIDI?

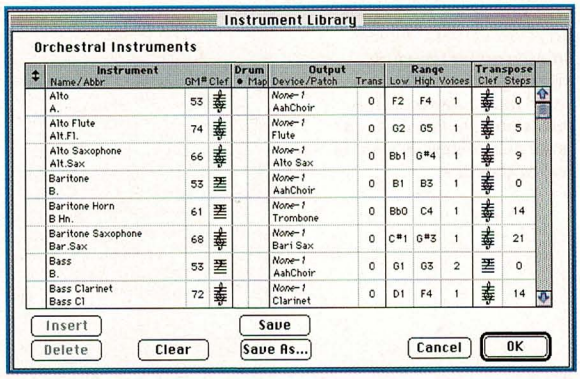
MIDI stands for Musical Instrument Digital Interface – the standard system for connecting music equipment to your Mac. MIDI is a communications protocol used to convert musical information such as notes into digital data. These can then be transmitted between synthesisers, enabling them to control each other, and recorded into a computer sequencer, enabling you to control them! As MIDI data is digital, its use is not limited to music and it can be used to control a range of applications.

New in version two

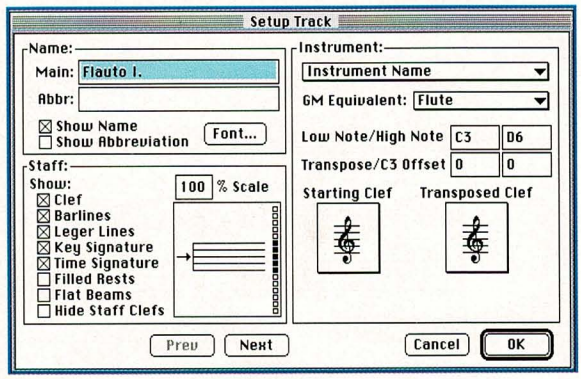
Overture **version one was released over two years ago, so the developers have had lots of time to dream up new features. In fact, there are over 100 of them! Here are a choice few:**

- **PostScript drawing tools, for drawing squares, rectangles, ovals, circles and lines.**
- **Instrument Library, which stores score information assigned to MIDI instruments. By picking an instrument, you immediately select all the score assignments.**
- **An updated Track window, which takes full advantage of the Instrument Library, enabling you to set up instruments and score assignments quickly.**
- **A complete set of tools providing all you need for guitar notation, including guitar bends, pre bend, articulation and Smart Tablature with glissandos and slurs.**
- **Jazz articulations including lift, slide, fall off, flip, smear and wow wow.**
- **Expression Library where you can create your own entries.**
- **Part Extraction enables you to name parts you've extracted, save them to different folders and split voices into separate parts.**

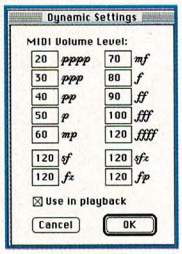
You'll also find there's a host of individual miscellaneous functions and improved features contained in *Overture v2.*


Instrument Library
Orchestral Instruments
Instrument Name/Abbr
GM# Clef
Drum Map
Output Device/Patch Trans
Range Low High Voices
Transpose Clef Steps
Alto A. 53 None-1 AahChoir 0 F2 F4 1 0
Alto Flute Alt.Fl. 74 None-1 Flute 0 G2 G5 1 5
Alto Saxophone Alt.Sax 66 None-1 Alto Sax 0 Bb1 G#4 1 9
Baritone B. 53 None-1 AahChoir 0 B1 B3 1 0
Baritone Horn B Hn. 61 None-1 Trombone 0 Bb0 C4 1 14
Baritone Saxophone Bar.Sax 68 None-1 Bari Sax 0 C#1 G#3 1 21
Bass B. 53 None-1 AahChoir 0 G1 G3 2 0
Bass Clarinet Bass Cl 72 None-1 Clarinet 0 D1 F4 1 14
Insert
Delete
Clear
Save
Save As...
Cancel
OK

The **Instrument Library** stores instrument names, clefs and pitch ranges to help you create a score layout quickly.



The **Setup Track** window holds instructions for the instrumentation and display of each stave.

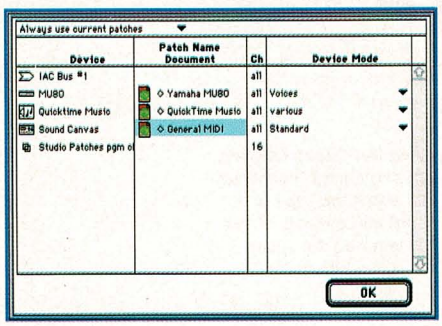


You can assign MIDI volume levels to dynamic instructions and *Overture* applies the changes during playback.

(which it handles surprisingly well), or step-time. There are keyboard shortcuts for most functions and it's easy to use your Mac's keyboard to select a note duration, for example, and then play the pitch from a keyboard.

Although it's not a MIDI sequencer, *Overture* has good MIDI playback facilities. If you have used **OMS** and the **Name Manager**, the instruments in the score will play back using the sounds they have been assigned. You can't do much editing during playback, however, which is a shame. But MIDI playback takes into account dynamic markings (you can set the levels the dynamics use) and follows repeat markings and endings, something very few programs do.

There is also a **Graphic** or **Piano Roll** editor which shows notes as oblongs on a grid – it's a popular editor in many sequencers. Here, you can edit controller data such as pitch bend and note velocity. However, there's no event list, and this highlights just one of the differences between a sequencer and a scorewriter. You can still tweak the MIDI playback from within the program, but it's not as flexible as a dedicated sequencer.



The **Name Manager** in the OMS is used to organise the names of the sounds in all your MIDI instruments.

Painless extraction

Part extraction is extremely flexible. The program can extract parts from a track into separate groups according to the voicing structure in the track, and it can automatically create names for the extracted parts. You can extract parts by voice, say if you have a flute or oboe orchestration that includes two or more instrument parts on one stave.

The printout, which is probably why you use a scorewriter, is excellent. What you see on-screen is what you get. The program includes both PostScript and TrueType fonts, so you can use it with PostScript and QuickDraw printers.

What's more, five manuals are supplied. The Getting Started manual explains the basic functions; it's a rather brief tutorial. The Encyclopedia is an A-to-Z of *Overture's* functions. The Reference Manual, a mammoth 531 pages, tells you everything about the menus and windows, while the OMS manual explains how to set up and use the OMS. And then there's the *Overture 2.0* Manual Supplement. Ah. Opcode couldn't quite bring itself to print a new manual, so you need to keep one eye on this while you read the others.

Overture v2 has virtually all the features you'd expect to find in a scorewriter, plus a few that you wouldn't. The support for guitar notation, the wealth of new features and the improved MIDI playback combine to make this a very meaty program indeed. **MF**

Overture 2.0

A professional scoring program, with more than enough features for all but the most demanding scores – and easy to use too.

Features	**92%**
Ease of use	**86%**
Documentation	**86%**
Value for money	**82%**

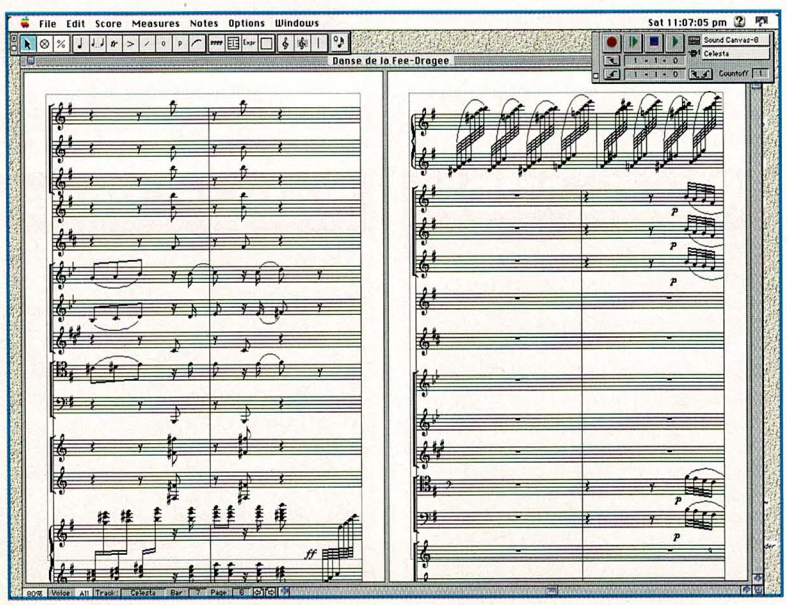
MF rating 89%

OMS

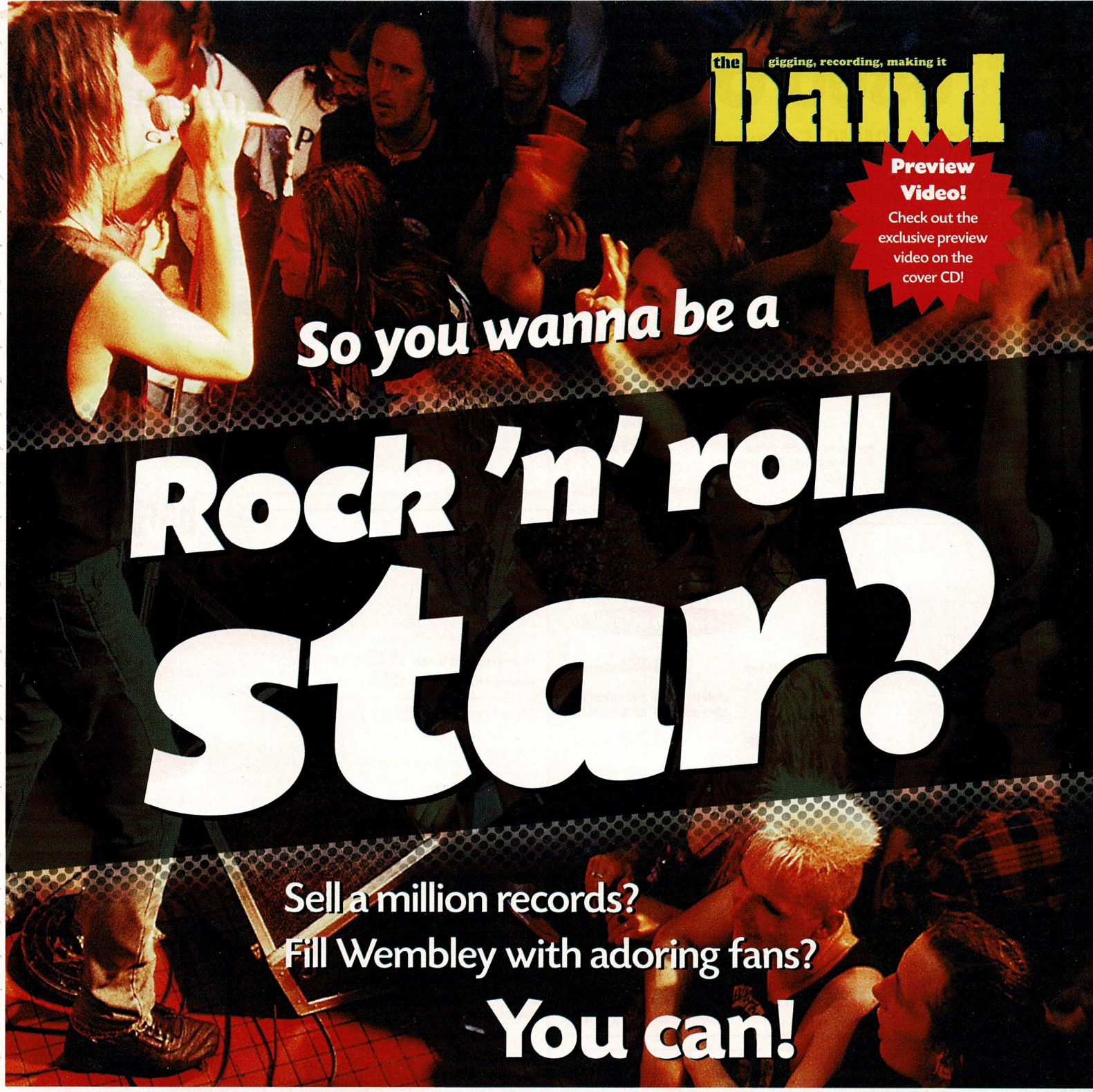
Opcode's OMS (Open MIDI System) replaces Apple's MIDI Manager, providing the link between music software applications and your MIDI equipment. Tell the OMS what equipment you have and then any OMS-compatible software will be aware of your setup.

Of particular interest is the OMS Name Manager, where you organise and store the names of the sounds in your MIDI equipment. If you have a couple of music programs and a couple of MIDI modules – perhaps even a MIDI module and the QuickTime Musical Instruments Extension – it's worth spending some time configuring OMS. It does take a while and you'll have to read the manual very carefully before you even attempt to do it. It's true to say that it's probably the most complex part of the entire package!

You only need OMS if you want to use *Overture's* MIDI features. (See the boxout on page 89 for a full explanation of MIDI and what it's used for.) If you simply want to enter scores with the mouse and print them, then you don't need it. You can obtain more details and a free copy of the OMS from Opcode's Web site, which you'll find situated at http://www.opcode.com/



You can print out your completed score on both PostScript and QuickDraw printers.



the band gigging, recording, making it

Preview Video!
Check out the exclusive preview video on the cover CD!

So you wanna be a Rock 'n' roll star?

Sell a million records?
Fill Wembley with adoring fans?

You can!

the band gigging, recording, making it

Ever noticed how some people make it and some don't? And how sometimes the ones that don't are more talented and sound better, but just don't get there? We have. That's why we're launching a brand new magazine on July 10 showing you just how you can make it in the music biz. It's called ***The Band***. Whether you already play in a band, want to play in a band, or just fancy life in the fast lane, get hold of issue 1. Either from your newsagent on July 10 or by becoming a founder subscriber (in which case your first issue comes absolutely free – just fill in the form and sit back).

YES! I want to be a founder subscriber to *The Band*
Please send me my first issue FREE and the next five for just £9.99

◯ **UK cheque/credit card** **£9.99**

Name _____

Address _____

_____

County _____ Postcode _____

Telephone _____

Method of payment (make cheques payable to Future Publishing Ltd)

◯ Access ◯ Visa Expiry date ◯◯/◯◯

Credit card number ◯◯◯◯ ◯◯◯◯ ◯◯◯◯ ◯◯◯◯

Signature _____ Date _____

◯ Tick here if you do not wish to receive direct mail from other companies

Send this form postage free together with payment to:

The Band Subscriptions, Future Publishing, FREEPOST (BS4900), Somerton, Somerset TA11 6BR

Code: BNDHA97

Mac OS

freephone

0800 680000

Access · American Express · Visa · Switch · Delta · Cheque Spread

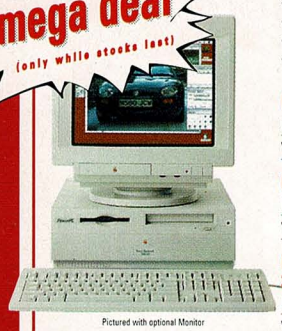
ALL PRICES ARE SHOWN INCLUSIVE AND EXCLUSIVE OF VAT
PLEASE CONFIRM YOUR PRICING WHEN PLACING AN ORDER

Bolton 01942 794040 Edinburgh 0131 556 4114 London 0171 582 4777 Woking 01483 797676

POWER MACINTOSH HARDWARE & BUNDLES

PowerMac 4400/160 & 200

mega deal (only while stocks last)



Pictured with optional Monitor

- 160MHz or 200MHz Motorola PowerPC 603e Processor
- Optional 256k Level 2 cache • 16Mb EDO RAM
- 1Mb Video RAM • 3 PCI expansion slots
- 1.2Gb or 2Gb Hard Drive • 8x Speed CD ROM Drive
- 2D graphics acceleration • 16-bit stereo audio input/output
- AppleDesign™ keyboard & Mouse

PowerMac 4400/160 16/1200 — £625 (£734.37)

Bundle Options	16Mb	32Mb
with 15" monitor	£835 (£981.12)	£885 (£1039.87)

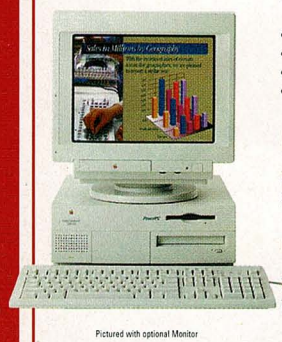
PowerMac 4400/200 16/1200 — £899 (£1056.32)

Bundle Options	16Mb	32Mb
with 15" monitor	£1099 (£1291.32)	£1149 (£1350.07)

PowerMac 4400/200 16/2000 — £1049 (£1232.57)
256k Level 2 cache & Network card

Bundle Options	16Mb	32Mb
with 15" monitor	£1249 (£1467.57)	£1299 (£1526.32)

PowerMac 7300/166



Pictured with optional Monitor

- 166MHz or 200MHz Motorola PowerPC 604e Processor (on upgradeable daughterboard) • 256k Level 2 cache
- 16Mb or 32Mb RAM • 2Mb VRAM • 2Gb Hard Drive
- 12x Speed CD ROM Drive
- 3 PCI expansion slots
- Apple Extended keyboard

Preloaded with MS Office 4.2.1

PowerMac 7300/166 16/2000 — £1499 (£1761.32)

Bundle Options	16Mb	32Mb
with Apple 17" monitor	£1849 (£2172.57)	£1879 (£2207.82)
with Apple 20" monitor	£2549 (£2995.07)	£2579 (£3030.32)

PowerMac 7300/200 32/2000 — £1799 (£2113.82)

Bundle Options	32Mb	64Mb
with Apple 17" monitor	£2149 (£2525.07)	£2209 (£2595.57)
with Apple 20" monitor	£2849 (£3347.57)	£2909 (£3418.07)

PowerMac 8600/200

Pictured with optional Monitor

- 200MHz Motorola PowerPC 604e Processor (on upgradeable daughterboard) • 256k Level 2 cache
- 32Mb RAM • 2Mb VRAM • 2Gb Hard Drive
- 12x Speed CD ROM Drive • Zip Drive
- 3 PCI expansion slots • Video in/out
- Apple Extended keyboard

PowerMac 8600/200 32/2000 — £2199 (£2583.82)

Bundle Options	32Mb	64Mb
with Apple 17" monitor	£2549 (£2995.07)	£2609 (£3065.57)
with Apple 20" monitor	£3249 (£3817.57)	£3309 (£3888.07)

PowerMac 9600/200 & 233

- 200MHz or 233MHz Motorola PowerPC 604e Processor (on upgradeable daughterboard)
- 512k Level 2 cache • 12x Speed CD ROM Drive • 6 PCI expansion slots •4Mb PCI Video Card
- Apple Extended keyboard

PowerMac 9600/200 32/4000CD — £2499 (£2936.32)

Bundle Options	32Mb	64Mb
with Apple 17" monitor	£2719 (£3194.82)	£2779 (£3265.32)
with Apple 20" monitor	£3405 (£4000.87)	£3465 (£4071.37)

PowerMac 9600/233 32/4000CD — £2849 (£3347.57)

Bundle Options	32Mb	64Mb
with Apple 17" monitor	£3199 (£3758.82)	£3259 (£3829.32)
with Apple 20" monitor	£3899 (£4581.32)	£3959 (£4651.82)

PowerMac 9600/200MP 32/4000CD — £3199 (£3758.82)

Bundle Options	32Mb	64Mb
with Apple 17" monitor	£3549 (£4170.07)	£3609 (£4240.57)
with Apple 20" monitor	£4249 (£4992.57)	£4309 (£5063.07)

PowerMac 9600/200 VAR (no RAM, no HD, no Video Card) CD — only £1459 (£1714.32)

Authorised Reseller

Dabs Direct are an Apple Authorised Reseller.
All Apple computers purchased from Dabs Direct carry a full Apple warranty and can be returned for repair to any Apple Service Centre world wide.

PERFORMA HARDWARE & BUNDLES

Performa 5260/120 — £724 (£850.70)

- 120MHz PowerPC 603e Processor
- 12Mb RAM (upgradeable to 64Mb) • 256k Level 2 cache
- 1.2Gb Hard Drive • 4x Speed CD ROM Drive
- Integral 14" monitor
- AppleDesign™ keyboard & Mouse

PowerMac 5400/180 — £999 (£1173.82)

- 180MHz PowerPC 603e Processor • Optional 256k Level 2 cache
- 16Mb RAM • 2Gb Hard Drive • 8x Speed CD ROM Drive
- Internal 28k8 voice/fax/modem • PCI expansion slot
- Integral 15" monitor • AppleDesign™ keyboard & Mouse

PowerMac 5500/225 — £1549 (£1820.07)

- 225MHz PowerPC 603e Processor • 256k Level 2 cache • 32Mb RAM • 2Gb Hard Drive
- 12x Speed CD ROM Drive • Video-In & FM/TV Tuner • Internal 33k6 voice/fax/modem
- Accelerated Multimedia and 3D graphics • PCI expansion slot • Integral 15" monitor
- AppleDesign™ keyboard & Mouse

Performa 6400 *Home Office*

bargain (only while stocks last)

- 180 MHz or 200MHz PowerPC 603e Processor
- Optional 256k Level 2 cache (standard on 6400/200)
- 16Mb RAM (expandable to 136Mb)
- 1.6Gb or 2.4Gb Hard Drive
- 2 PCI expansion slots
- 8x Speed CD ROM Drive
- Internal 28k8 voice/fax/modem
- AppleDesign™ keyboard & Mouse

StyleWriter 1500 only £40 extra (£47.00)

Performa 6400/180 16/1600 — £822 (£965.85)

Performa 6400/200 16/2400 — £959 (£1126.82)

Performa 6400/180 16/1600 £1052 (£1236.10) with 15" AV monitor

Performa 6400/200 16/2400 £1189 (£1397.07) with 15" AV monitor

Performa 6400 *Creative Studio* — £1313 (£1542.77)

- 200MHz PowerPC 603e Processor
- 256k Level 2 cache
- 24Mb RAM (expandable to 136Mb)
- 2.4Gb Hard Drive
- 8x Speed CD ROM Drive
- Internal 28k8 voice/fax/modem
- Video-In & TV Tuner
- Avid Cinema Video Editing Suite
- AppleDesign™ keyboard & Mouse

StyleWriter 2500 only £79 extra (£92.82)

Performa 6400/200 24/2400 with 15" AV monitor — £1543 (£1813.02)

PowerMac 6500 *Home Office* — £1313 (£1542.77)

new MODEL

- 250MHz PowerPC 603e Processor
- Optional 256k Level 2 cache
- 32Mb RAM (expandable to 128Mb)
- 3Gb Hard Drive
- Accelerated Multimedia and 3D graphics
- 12x Speed CD ROM Drive
- Internal 33k6 voice/fax/modem
- AppleDesign™ keyboard & Mouse

Performa 6500/250 32/3000 with 15" AV monitor — £1649 (£1937.57)

PowerMac 6500 *Creative Studio* — £1771 (£2080.92)

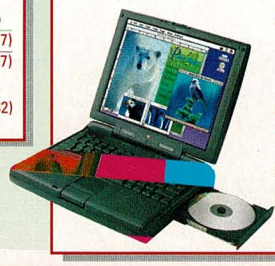
- 275MHz PowerPC 603e Processor • 256k Level 2 cache
- 32Mb RAM (expandable to 128Mb) • 4Gb Hard Drive
- 12x Speed CD ROM Drive • Accelerated Multimedia and 3D graphics
- Internal 33k6 voice/fax/modem • Video-In & FM/TV Tuner
- Avid Cinema Video Editing Suite • AppleDesign™ keyboard & Mouse

PowerMac 6500/275 32/4000 with 15" AV monitor — £2149 (£2525.07)

POWERBOOK HARDWARE

PowerBook 1400

PowerBook 1400cs/117 12/1000	£1149 (£1350.07)
PowerBook 1400cs/117 16/1000CD	£1349 (£1585.07)
PowerBook 1400cs/117 16/1000CD & Colour Stylewriter 2200 & Carry Case	£1499 (£1761.32)
PowerBook 1400cs/133 16/1300CD	£1799 (£2113.82)
PowerBook 1400c/133 16/1300CD	£2199 (£2583.82)



PowerBook 3400c

PowerBook 3400c/180 16/1300	£2699 (£3171.32)
PowerBook 3400c/180 16/1300CD Ethernet	£2999 (£3523.82)
PowerBook 3400c/200 32/2000CD E/net SoftWin	£3499 (£4111.32)
PowerBook 3400c/240 16/3000CD Ethernet	£3999 (£4698.82)

Export Orders please call 01942 794040, and ask for our Export Division

Excellent Quality • Superior Service • Unbeatable Value

Authorised Reseller

PRICE MATCHING
We can usually match other dealers prices. Please call for details

- ✔ Serving you since 1987
- ✔ Over £31m annual turnover
- ✔ Over 150,000 satisfied customers
- ✔ Highly trained specialist staff
- ✔ Repair & upgrade services

DABS DIRECT

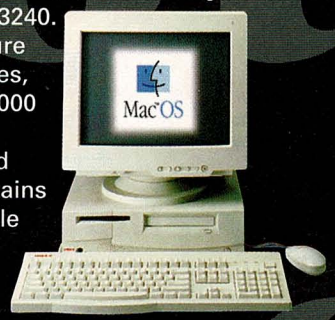
PERSONAL COMPUTER SYSTEMS

SALES FAX 01942 797979 **WEB SITE http://www.dabs.com** **EMAIL macsales@dabs.com**

Thinking Macs... Think UMAX

THE APUS SERIES

The advanced **UMAX Apus** 2000 and 3000 computer series provides all the benefits of the Apple environment, in a flexible and high performance desktop package. The **UMAX Apus** series offers advanced processing power with a PowerPC 603e CPU running at 160MHz in the **Apus** 2160 to 240MHz in the **Apus** 3240. With their standard architecture and many future-proof features, the **UMAX Apus** 2000 and 3000 series is aimed at the widest range of general business and graphics applications, and retains full compatibility with all Apple hardware and operating system software.



APUS 2160
Pictured with optional Monitor & Keyboard

PULSAR 200MHz
Pictured with optional Monitor & Keyboard

Mac OS

PowerPC

Umax Apus 2160 — £595 (£699.12)
- 160MHz PowerPC 603e
- 16Mb RAM
- 1.2Gb EIDE Hard disk
- 8-speed SCSI CD-ROM
- Claris Works 4.0

Umax Apus 3200 — £1025 (£1204.37)
- 200MHz PowerPC 603e
- 256K Level 2 cache socket (upgradeable to 1Mb)
- 2.1Gb EIDE Hard disk
- 16Mb RAM
- 8-speed SCSI CD-ROM
- Freehand Graphics Studio 2.0 & Claris Works 4.0

Umax Apus 3240 — £1300 (£1527.50)
- 240MHz PowerPC 603e
- 256K Level 2 cache socket (upgradeable to 1Mb)
- 2.1Gb EIDE Hard disk
- 16Mb RAM
- 8-speed SCSI CD-ROM
- Freehand Graphics Studio 2.0 & Claris Works 4.0

THE PULSAR SERIES

The **UMAX Pulsar** is one of the worlds most powerful desktop machines, 100% Macintosh compatible (without exception) and out performing all comers in its class.

Umax Pulsar 200AV — £2175 (£2555.62)
- 200MHz PowerPC 604e
- 512K Level 2 cache
- 2 Gb fast SCSI hard disk
- 32Mb RAM (expandable to 1.04Gb)
- 8-speed SCSI CD-ROM
- ATI Xclaim VR graphics accelerator with 2MB
- Freehand Graphics Studio 2.0 & Claris Works 4.0

Umax Pulsar 225 — £2500 (£2937.50)
- 225MHz PowerPC 604e
- 512K Level 2 cache
- 4 Gb fast SCSI hard disk
- 32Mb RAM (expandable to 1.04Gb)
- 8-speed SCSI CD-ROM
- ATI Xclaim 3D graphics accelerator with 4MB
- Freehand Graphics Studio 2.0 & Claris Works 4.0

Umax Pulsar 200DP — £2900 (£3407.50)
- 2 x 200MHz PowerPC 604e
- 512K Level 2 cache
- 4 Gb fast SCSI hard disk
- 32Mb RAM (expandable to 1.04Gb)
- 8-speed SCSI CD-ROM
- ATI Xclaim 3D graphics accelerator with 4MB
- Freehand Graphics Studio 2.0 & Claris Works 4.0

UMAX SCANNERS

NEW

ASTRA 600S

The **UMAX Astra 600S** is a 30 bit, single pass, colour scanner with a maximum scanning area of US legal size (8.5" x 14")

Umax Astra 600S — FROM £169 (£198.57)
- 30 bit colour scanning
- 300 x 600dpi optical resolution
- 4800 x 4800 maximum resolution
- Single Pass, colour CCD
- Bundled software:
  Presto! PageManager, UMAX Copy Utility & VistaScan

Umax Astra 1200S — FROM £299 (£351.327)
30 bit colour scanning
- 600 x 1200dpi optical resolution
- Maximum resolution: 9600 x 9600 dpi
- Bundled software: *VistaScan & PageManager*

The all new
Umax Powerlook *ColourStudio II* — FROM £749 (£880.07)
- Bundled software:
  Macromedia Freehand Graphics Studio v2.0
  Binuscan PhotoPerfect Advanced
  Adobe Photoshop LE (3.05) or Adobe Photoshop (Full v4)

Prices shown in brackets are inclusive of VAT

Transparency adaptor available for all **UMAX** scanners

Call for details of CoverPlus Extended Warranty

Excellent Quality • Superior Service • Unbeatable Value

Open 9.00am to 5.00pm Monday to Friday • 10.00am to 3.00pm Saturday

freephone

0800 680000

Access · American Express · Visa · Switch · Delta · Cheque Spread

ALL PRICES ARE SHOWN INCLUSIVE AND EXCLUSIVE OF VAT
PLEASE CONFIRM YOUR PRICING WHEN PLACING AN ORDER

BOLTON 01942 794040 EDINBURGH 0131 556 4114 LONDON 0171 582 4777 WOKING 01483 797676

MEMORY

		72pin SIMM	168pin FPM	168pin EDO 3.3V	168pin EDO 5V
8Mb	ex VAT	25.00	33.00	47.00	33.00
	inc VAT	29.37	38.77	55.22	38.77
16Mb	ex VAT	47.00	59.00	65.00	59.00
	inc VAT	29.37	69.32	76.37	69.32
32Mb	ex VAT	94.00	99.00	138.00	99.00
	inc VAT	29.37	116.32	162.15	116.32
64Mb	ex VAT	289.00	190.00	-	190.00
	inc VAT	29.37	223.25	-	223.25

VRAM	ex VAT	inc VAT
PowerMac/Pulsar 1Mb	25	29.37
PowerMac 4400/StarMax/Apus 2Mb	35	41.12
PowerMac 4400/StarMax/Apus 4Mb	49	57.57
Cache		
PowerMac PCI 256k	45	52.87
PowerMac PCI 512k	69	81.07
PowerMac 4400/StarMax/Apus 256k	69	81.07
PowerMac 4400/StarMax/Apus 512k	129	151.57

APPLE HANDHELDS

	ex VAT	inc VAT
Newton Message Pad 130	469	551.07
Newton Message Pad 2000	615	722.62
1Mb Storage card	60	70.50
2Mb Storage card	110	129.25
Fax Modem	80	94.00
Keyboard	78	91.65
Leather Carry case	40	47.00
Print Pack	45	52.87
Recharger & Mains	54	63.45

ACCESSORIES

	ex VAT	inc VAT
Picasso 106key Extended Keyboard	39	45.82
Apple Design Keyboard	58	68.15
Apple Extended Keyboard	85	99.87
Apple Adjustable Keyboard	132	155.10
Apple Desktop II Mouse	35	41.12
Apple Design Speakers II	46	54.05
Apple PlainTalk Microphone	15	17.62
Apple 5400/6400 Video-in card	65	76.37
Apple 5400/6400 Video-in-TV card	125	146.87
Apple Presentation kit	199	233.82
Apple QuickDraw 3D Accelerator	265	428.87
Apple PowerPC 604 120MHz upgrade	269	316.07
Apple PowerPC 604 132MHz upgrade	379	445.32
Apple 586 DOS Card PCI	465	546.37
Apple Pentium DOS Card PCI	619	727.32
Adaptec 2940 WideSCSI Kit	185	217.37

DIGITISERS

WACOM	ex VAT	inc VAT
ArtPad II + Dabbler	99	116.32
A5 UltraPad	199	233.82
A5 UltraPad+Painter	315	370.12
A4 UltraPad	299	351.32
A4 UltraPad+Painter	405	475.87
A3 UltraPad	479	562.82
A3 Electrostatic	599	703.82
A2 UltraPad	1299	1526.32

HARD DRIVES

		Internal	External
2Gb	ex VAT	165.00	235.00
	inc VAT	193.87	276.12
3.2Gb	ex VAT	195.00	265.00
	inc VAT	229.12	311.37
4Gb	ex VAT	275.00	335.00
	inc VAT	323.12	393.62
9Gb	ex VAT	725.00	889.00
	inc VAT	851.87	1044.57

REMOVABLE DRIVES

d2	ex VAT	inc VAT
540Mb External	219	257.32
Jaz 1Gb External	299	351.32
230Mb Magneto Optical External	235	276.12
640Mb Magneto Optical External	329	386.57
IOMEGA		
Zip 100Mb External	87	102.22
Jaz 1Gb External	232	272.60
PINNACLE		
Vertex 2.6Gb External	829	974.07
Apex 4.6Gb External	1240	1457.00
NOMAI		
540Mb External	189	222.07
SYQUEST		
EZ Flyer 230Mb External	122	143.35
SyJet 1.5Gb Internal	335	393.62
SyJet 1.5Gb External	344	404.20

All include cable, software & 1 cartridge

StarMax

StarMax 3000 Systems (PowerPC 603e)

	3180 Desktop	3180 Mini Tower	3200 Desktop	3200 Mini Tower	3240 Mini Tower
Processor	180MHz	180MHz	200MHz	200MHz	240MHz
Memory	16Mb	32Mb	16Mb	32Mb	32Mb
VRAM	1Mb	1Mb	1Mb	1Mb	4Mb
Hard Disk	1.2Gb	2.5Gb	1.2Gb	2.5Gb	2.5Gb
PCI Slots	3	5	3	5	5
Drive Bays	2 External, 1 Internal	3 External, 2 Internal	2 External, 1 Internal	3 External, 2 Internal	3 External, 2 Internal
Price	£799 (£938.82)	£899 (£1056.32)	£1099 (£1291.32)	£1249 (£1467.57)	£1599 (£1878.82)

Mini Tower Pictured with optional Monitor

StarMax 4000 Systems (PowerPC 604e)

	4160 Desktop	4160 Mini Tower	4200 Desktop	4200 Mini Tower
Processor	160MHz	160MHz	200MHz	200MHz
Memory	16Mb	32Mb	16Mb	32Mb
VRAM	2Mb	2Mb	2Mb	2Mb
Hard Disk	1.2Gb	2.5Gb	1.2Gb	2.5Gb
PCI Slots	3	5	3	5
Drive Bays	2 External, 1 Internal	3 External, 2 Internal	2 External, 1 Internal	3 External, 2 Internal
Price	£1299 (£1526.32)	£1499 (£1761.32)	£1849 (£2172.57)	£1949 (£2290.07)

Desktop Pictured with optional Monitor

Prices shown in brackets are inclusive of VAT

All models include: 256k Level 2 Cache, Internal 1.44Mb SuperDrive, Internal 8x CD-ROM Drive, Stereo 16-Bit Sound I/O, Keyboard & Mouse, Five-Year (1st year on-site) Manufacturer's Warranty.

MOTOROLA

Picasso

Mac OS PowerPC

DABS DIRECT

The NEW Picasso range of Mac™OS machines by Dabs Direct

...available soon

3 DRIVES IN ONE!

NOMAI 680.RW
CD-RECORDABLE/REWRITABLE COMPACT DISC DRIVE

Mac OS

NOMAI
The Media Choice

All your favourite media is available with the NOMAI quality brand name.

Each removable cartridge or disk carries a 5 year warranty and a track record of success with millions of NOMAI media in use worldwide.

NOMAI 680.RW
CD-RECORDABLE/REWRITABLE COMPACT DISC DRIVE
only £379 (£445.32 inc VAT)

- **3 Drives in 1:** Unique multi-function concept combining 6x CD-ROM reader, 2X CD-Recorder and the world's first 2X CD-ReWritable drive !

The NOMAI 680.RW is a 6X CD reader which will play any CD type (CD-ROM, CD-Audio, CD-Video, ...)

In addition to recording information on low cost CD-Recordable (CD-R) media, the NOMAI 680.RW is also the first drive on the market to write and rewrite newly standardised CD-Rewritable (CD-RW) discs.

- Endless high capacity mobile storage at a very attractive cost per megabyte - Use CD-Recordable or CD-ReWritable, depending on the task at hand.

NOMAI™

MONITORS

APPLE	ex VAT	inc VAT
MultiScan 15"	215	252.62
MultiScan 15" AV	284	333.70
Applevision 1705	389	457.07
Applevision 1710	485	569.87
Applevision 1710AV	539	633.32
MultiScan II 20"	1079	1267.82
CTX		
1451CLR 14"	129	151.57
1569S 15"	189	222.07
1569MS 15" & Speakers	229	269.07
1765S 17"	299	351.32
1769MS 17" & Speakers	349	410.07
1785S 17"	349	410.07
1785XE 17"	399	468.82
1785XA 17" DiamondTron	449	527.57
2085XE 20"	699	821.32
2185XE 21"	899	1056.32
HITACHI		
CM500ET 15"	229	269.07
CM620ET 17"	369	433.57
CM630ET 17"	439	515.82
CM611ET 17"	535	628.62
CM2096 20"	759	891.82
CM802E 21"	899	1056.32
CM802ET 21"	1069	1256.07
CM803ET 21"	1369	1608.57
LCD DT3130	1026	1205.55
IIYAMA		
MF-8515G 15"	229	269.07
MF-8617E 17"	415	487.62
MF-8617ES 17" & Speakers	449	527.57
MT-9017E 17" DiamondTron	449	527.57
MF-8221T 21"	925	1086.87
MF-8721T 21"	959	1126.82
MT-9021T 21" DiamondTron	959	1126.82
MITSUBISHI		
DiamondPro 67TXV 17" DiamondTron	399	468.82
DiamondPro 87TXM 17" DiamondTron	459	539.32
DiamondPro 91TXM 21" DiamondTron	999	1173.82
NEC		
Multisync XV15+ 15"	243	285.52
M500 15"	258	303.15
Multisync XV17+ 17"	417	489.97
M700 17"	425	499.37
Multisync P750 17"	558	655.65
Multisync E1100 21"	935	1098.62
Multisync P1150 21"	1026	1205.55
NOKIA		
447V 17"& Speakers	399	468.82
449E 17" Trinitron	495	581.62
447Xi 17" Trinitron	439	515.82
447Xav 17" & Speakers	618	726.15
445Xi 21"	999	1173.82
RADIUS		
Intellicolor 20/f	899	1056.32
PrecisionView 21	919	1079.82
Pressview 17SR	1685	1979.87
Pressview 21SR	2869	3371.07
SONY		
Multiscan 100sx 15"	224	263.20
Multiscan 100sft 15"	257	301.97
Multiscan 200sx 17"	383	450.02
Multiscan 200sft 17"	448	526.40
Multiscan 17sell 17"	585	687.37
Multiscan 300sft5 20"	898	1055.15
Multiscan 20sh 20"	1479	1737.82
Multiscan 20sell 20"	1029	1209.07

CD-ROM DRIVES

	ex VAT	inc VAT
x12 Speed	139	163.32
x16 Speed	159	186.82

CD RECORDING

d2	ex VAT	inc VAT
x2 Speed	325	381.87
x4 Speed	455	534.62
NOMAI		
680.RW	379	445.32
PHILIPS		
CDD-2600 x2 Speed	325	381.87
PLASMON		
CDR4240 x2 Speed	359	421.82
YAMAHA		
CDR-400 x4 Speed	465	546.37

All include cables, software and 1 disk

DAT STREAMERS

	ex VAT	inc VAT
4/8Gb External	739	868.32
4/16Gb External	839	985.82

Includes cables, drivers & Retrospect Remote

Excellent Quality • Superior Service • Unbeatable Value

Export Orders please call 01942 794040, and ask for our Export Division

Authorised Reseller

PRICE MATCHING
We can usually match other dealers prices. Please call for details

- ✔ Serving you since 1987
- ✔ Over £31m annual turnover
- ✔ Over 150,000 satisfied customers
- ✔ Highly trained specialist staff
- ✔ Repair & upgrade services

DABS DIRECT
PERSONAL COMPUTER SYSTEMS

SALES FAX 01942 797979 **WEB SITE http://www.dabs.com** **EMAIL macsales@dabs.com**

SCANNERS

	ex VAT	inc VAT
ACER		
AcerScan 300F	169	198.57
AcerScan 610 Plus	285	334.87
AGFA		
SnapScan	169	198.57
StudioScan IIsi Lite	315	370.12
StudioScan IIsi Full	379	445.32
StudioStar	550	646.25
Arcus II & Transparency Adaptor	1499	1761.32
DuoScan	2795	3284.12
APPLE		
Colour OneScanner 600/27	325	381.87
Colour OneScanner 1200/30	489	574.57
EPSON		
GTx-5000	223	262.02
GTx-8500	369	433.57
GTi-8500	469	551.07
GTx-9500	446	524.05
GTi-9500	538	632.15
FilmScan 200	364	427.70
HEWLETT PACKARD		
Scanjet 4s	115	135.12
Scanjet 5p	225	264.37
Scanjet 4C	545	640.37
Scanjet 4C Graphics Pro	645	757.87
MICROTEK		
ScanMaker E3	136	159.80
ScanMaker E6	269	316.07
ScanMaker III	595	699.12
ScanMaker Designer Pro	1195	1404.12
Photoshop LE	30	35.25
Photoshop Full	130	152.75
NIKON		
Scantouch 110	189	222.07
Scantouch 110 LE	259	304.32
Scantouch 210 LE	599	703.82
Scantouch 210 Full	785	722.62
CoolScan II External	559	656.82
CoolScan II Internal	579	677.97
Super Coolscan	1159	1361.82
SHARP		
JX-250	179	210.32
JX-330	710	834.25
JX-610 A3	4299	5051.32
UMAX		
Astra 600S PM	169	198.57
Astra 1200S PM	299	351.32
PM = VistaScan & Page Manager software		
Photoshop LE add	20	23.50
Full Photoshop add	100	117.50
Full Photoshop & Tranny Adaptor add	299	351.32
Powerlook ColourStudio II LE	749	880.07
Powerlook ColourStudio II Plus	899	1056.32
Powerlook ColourStudio II Pro	1149	1350.07
Powerlook 2000 Pro	2799	3288.82
Mirage D-16L Pro	5495	6456.62
VISIONEER		
PaperPort Vx	195	229.12

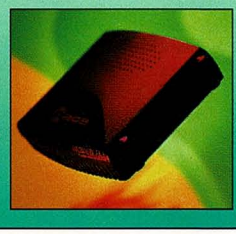
DIGITAL CAMERAS

	ex VAT	inc VAT
AGFA		
ePhoto 307	254	298.45
APPLE		
QuickTake 200	359	421.82
CASIO		
QV-11A	249	292.57
QV-100A	399	468.82
QV-300	499	586.32
CONNECTIX		
QuickCam	65	76.37
QuickCam Colour	139	163.32
FUJI		
DS-7	425	499.37
KODAK		
DC20	112	131.60
DC25	295	346.62
DC50	399	468.82
DC120	689	809.57
KONICA		
Q-Mini	409	480.57
OLYMPUS		
C-400	255	299.62
C-410L	499	586.32
C-800L	808	949.40
RICOH		
RDC-2L	499	586.32
SANYO		
DigiCam	469	551.07
SONY		
DSC-F1	525	616.87

pace

MICROLIN 33.6 for Mac
The ideal modem solution for your Mac
Data transfer • Send & receive fax • Internet access • e-mail

- 33.6Kbps desktop modem
- High speed send and receive fax
- Error correction & data compression
- Extension socket for parallel telephone connection
- Complete with cables and fax & data comms software
- Free Internet trial software



£69 (£81.07 inc VAT)

HITACHI
The true definition of a monitor

CM620ET
17-INCH COLOUR DISPLAY MONITOR

- Best value colour monitor for GUI applications
- 0.22mm horizontal mask pitch
- Flicker Free (75Hz) at up to 1152 x 770 resolution
- PC, Mac and Workstation compatible
- TCO '92 compliance
- 3 year on-site replacement warranty

£369 (£433.57 inc VAT)

Masters of Monitor Technology HITACHI

MOTOROLA

3400 Mac 28.8
Data Fax Modem

- 28.8 kbps data/fax modem
- Worldwide compatibility
- Easy installation
- User manual Included
- 5 years warranty
- Internet software
- Telephone support
- Cables included

£73 (£85.77 inc VAT)

33.6 £135 (£158.62 inc VAT)
PCMCIA PC/MAC Modem

ATi

XCLAIM™ 3D
Offering phenomenal 3D and 2D graphics performance for design and multimedia professionals. It's all you need to turn your PCI Mac into a graphics powerhouse.

XCLAIM™ 3D 4Mb **£149** (£175.07 inc VAT)
XCLAIM™ 3D 8Mb **£199** (£233.82 inc VAT)

visioneer
PAPERPORT VX
World's most popular paper management system

£195 (£229.12 inc VAT)

- Links to many popular applications.
- Edit, fax, file, copy and email your paper documents *(printer/modem required to print/fax)*
- Unique compression chip
- Exclusive SharpPage technology
- Intelligent filing system
- Annotation tools
- Includes SCSI Adapter worth £45

Award winner! *PaperPort has won more awards than any other product in its class!*

EPSON

GTx-9500
SCANNER

- 4800 dpi and 36 bits per pixel in colour
- SCSI interface
- Advanced scanning options - TET, batch, page frame and negative film scanning
- Optional transparency unit and document feeder
- 1 year RTB warranty

£446 (£524.05 inc VAT)

EPSON STYLUS COLOR 600

- 1440dpi
- 6ppm mono, 4ppm col

£214 (£251.45 inc VAT)

A4 EDGE TO EDGE

GCC TECHNOLOGIES

GCC Elite 1212 **£1079** (£1267.82 inc VAT)

- A4 Edge to Edge printing
- 1200 x 1200 dpi
- 50MHz RISC processor
- 12 pages per minute
- Ethernet 10BaseT and 10Base2
- 8Mb RAM (expandable to 64Mb with 72 pin SIMMS)
- Postscript level 2, PCL5
- MacOS, Windows 3.1, 95, NT

VIDEO BOARDS

	ex VAT	inc VAT
ATI		
Xclaim 3D 4Mb	149	166.85
Xclaim VR 4Mb	189	222.07
Xclaim 3D 8Mb	199	230.30
FORMAC		
ProVision 2/20 - 2Mb	97	113.97
ProVision 2/40 - 4Mb	135	158.62
ProVision 4/60 - 4Mb	219	257.32
ProVision 4/80 - 8Mb	249	292.57
IMS		
TwinTurbo 128 2Mb	149	175.07
TwinTurbo 128 4Mb	229	269.07
TwinTurbo 128 8Mb	329	386.57
MATROX		
Millenium 4Mb WRAM PCI	159	186.82
Millenium 8Mb WRAM PCI	269	316.07
MEDIA 100		
Media 100 qx	1999	2348.82
Media 100 qx-c	3149	3700.07
MIRO		
DC20 LE	489	574.57
NUMBER 9		
Imagine 128 4Mb PCI	369	433.57
Imagine 128 8Mb PCI	549	645.07
RADIUS		
Precision Colour 8/1600	295	346.62
Thunder 30/1600	639	750.82

MODEMS

	ex VAT	inc VAT
APPLE		
Geoport adaptor II	105	123.37
Performa Personal Comms kit 28K8	175	205.62
GLOBAL VILLAGE		
Teleport Platinum 33k6 Internet	108	126.90
Powerport Platinum & Ethernet PCMCIA	245	287.87
HAYES		
Accura 336	92	108.10
Accura 336 Voice	102	119.85
LASAT		
Safire 33k6	98	115.15
PACE		
Microlin 33k6	69	81.07
US ROBOTICS		
Sportster Voice 33k6	97	113.97
Sportster X-Jack 28k8 PCMCIA	108	126.90
ZOOM		
14k4 Fax/Modem	29	34.07

INKJET PRINTERS

	ex VAT	inc VAT
APPLE		
Colour StyleWriter 1500	99	116.32
Colour StyleWriter 2500	149	175.07
CANON		
BJC-4550	272	319.60
BJC-5500	484	568.70
EPSON		
Stylus Color 600	214	251.45
Stylus Color 800	312	366.60
Stylus Color 1520	593	696.77
Stylus Photo	326	383.05
Stylus Color 3000	1118	1313.65
Postscript Upgrade	89	104.57
FARGO		
Fotofun	349	410.07
Primera Pro	1299	1526.32
HEWLETT PACKARD		
DeskWriter 340C+ASF	189	222.07
Deskjet 870Cxi	265	311.37
DeskJet 1600CM	1207	1418.22

LASERS

	ex VAT	inc VAT
APPLE		
LaserWriter 4/600PS	554	650.95
LaserWriter 12/640PS	884	1038.70
LaserWriter 16/600PS	1372	1612.10
LaserWriter Colour 12/660PS	4010	4711.75
EPSON		
EPL-5500PS	586	688.55
GCC		
Elite XL 608	2099	2466.32
Elite XL 616	2495	2931.62
Elite 1212 A4	1079	1267.82
Elite XL 808 A3	2899	3406.32
Elite XL 1208 A3	3599	4228.82
HEWLETT PACKARD		
LaserJet 6MP	514	603.95
LaserJet 5M	950	1116.25
LaserJet 4MV	1643	1930.52
LaserJet 5SiMX	2272	2669.60
Colour LaserJet 5M	3428	4027.90

Excellent Quality • Superior Service • Unbeatable Value

Open 9.00am to 5.00pm Monday to Friday • 10.00am to 3.00pm Saturday

CABLES

	ex VAT	inc VAT
Macintosh Printer 2m	5	5.87
Macintosh Printer 6m	8	9.40
Modem MD8-D25M 2m	10	11.75
Localtalk Cable 2m	5	5.87
Localtalk Cable 5m	7	8.22
SCSI D25M - C50M 1m	6	7.05
SCSI D25M - HC50M 1m	10	11.75
SCSI C50M - C50M 1m	8	9.40
SCSI C50M - C50M 2m	12	14.10
SCSI HC50M - C50M 1m	10	11.75
SCSI HC50M - C50M 2m	12	14.10
SCSI HC50M -HC50M 1m	10	11.75
SCSI HC50M -HC50M 2m	18	21.15
SCSI HC68 - C50M 1m	15	17.62
SCSI HC68 - HC50M 1m	18	21.15
SCSI HC68 - HC68M 1m	20	23.50
Localtalk Kit	12	14.10
Phonenet Kit	10	11.75
ADB Splitter	8	9.40

ORIGINAL INKJET CARTRIDGES

		ex VAT	inc VAT
APPLE			
M8041	SW1200/1500 Black	14	16.45
M4609	SW1500 Colour	23	27.02
M3909	CSW2200 Black	26	30.55
M3908	CSW2200 Colour	31	36.42
M3912	CSW2200 Black Tank	12	14.10
M3911	CSW2200 Colour Tank	17	19.97
M3240	CSW2500 Black	24	28.20
M3328	CSW2500 Colour	31	36.42
M3330	CSW2500 Black Tank	8	9.40
M3329	CSW2500 Colour Tank	13	15.27
EPSON			
S020047	Stylus 820/II/IIs/200 Black	14	16.45
S020049	Stylus II/IIs/200 Colour	18	21.15
S020093	Stylus 400/500/600 Black	14	16.45
S020097	Stylus 200/500 Colour	18	21.15
S020108	Stylus 800/1520 Black	18	21.15
S020089	Stylus 4/6/800/1520 Colour	14	16.45
S020034	Stylus Colour/Pro Black	10	11.75
S020036	Stylus Colour/Pro Colour	22	25.85
S020066	Stylus Pro XL+ Colour	22	25.85
HEWLETT PACKARD			
51626A	DJ 500 Black	15	17.62
51625A	DJ 500 Colour	16	18.80
51629A	DJ 600/660/690 Black	16	18.80
51649A	DJ 600/660/690 Colour	18	21.15
51645A	DJ 820/850/870/1600 Black	16	18.80
51641A	DJ 820/850/870 Colour	18	21.15
51645A	Deskjet 1600 Black	16	18.80
51640C/M/Y	DJ 1600 Colours	19	22.32
51639A	PJ XL300 Black	13	15.27
51639C/M/Y	PJ XL300 Colours	14	16.45

ORIGINAL TONERS

		ex VAT	inc VAT
APPLE			
M2473	LW 600/630/16/600	85	99.87
M0180	LaserWriter Plus	65	76.37
M2045	LW 300/320/4/600	45	52.87
M1960	LW Select 300/310/360	70	82.25
M0089	Personal LW LS/SC/NTR	47	55.22
M4683	LaserWriter 12/640PS	89	104.57
HEWLETT PACKARD			
92275A	LaserJet IIP/IIIP	46	54.05
92295A	LaserJet II/III	42	49.35
92298A	LaserJet 4M/4M+/5M	54	63.45
92274A	LaserJet 4ML/4MP	39	45.82
C3900A	LaserJet 4MV	91	106.92
C3903A	LaserJet 5MP/6MP	45	52.87
C3909A	LaserJet 5SiMX	119	139.82
GCC			
AC-15032	Elite 600	75	88.12
AC-15616	Elite XL616/608/808/1208	150	176.25

STATIONERY

		ex VAT	inc VAT
EPSON			
SE41001	T-Shirt Transfer Pack	12	14.10
S041059	A4 360dpi 100sht	9	10.57
S041061	A4 1440dpi 100sht	11	12.92
S041071	A4 Photo Glossy 1440dpi 15sht	20	23.50
S041079	A2 Photo 1440dpi 30sht	23	27.02
S041065	A3 Coated 360dpi 100sht	17	19.97
S041068	A3 Coated 720dpi 100sht	22	25.85
S041066	A3+ 360dpi 100sht	20	23.50
S041069	A3+ Photo 1440dpi 100sht	27	31.72
S041073	A3 Photo Gloss 1440dpi 10sht	32	37.60
S041074	A3+ Photo Gloss 1440dpi 10sht	40	47.00
HEWLETT PACKARD			
51634Z	A4 Premium 200sht	16	18.80
C3831A	A4 Premium Glossy 10sht	9	10.57
C3837A	A4 Premium Glossy 50sht	36	42.30
C3832A	A4 Prem Transparency 20sht	18	21.15
C3835A	A4 Prem Transparency 50sht	33	38.77

TextBridge PRO

- HTML Output
- Instant Access OCR
- DocuRT OCR Engine for superior accuracy
- Format retention of cell tables and multiple columns
- High accuracy on degraded documents
- Word Training
- Support for 11 European languages
- Outputs to all common WP formats
- Upgrade your bundled OCR for only £49 (£57.57)

only £69 (£81.07 inc VAT)

ePhoto 307

Digital Camera

Includes: Agfa PhotoWise and Adobe PhotoDeluxe software

- Stores 36 high resolution photos at 640x480 pixels or 72 low resolution photos at 320x240 pixels
- High quality 24 bit colour images
- 43mm glass lens (equivalent to a 35mm camera)
- Built-in auto flash from 3 ft - 10 ft (0.9m - 3m)
- Focus free lens from 2 ft - infinity (0.6m - infinity)
- Ten second self timer

ePhoto 307 £254 (£166.85 inc VAT)

AGFA
The complete picture.

zip 100

Zip is 20 times as fast and offers 70 times the space of a traditional floppy.

- 100Mb capacity per diskette
- Available as Macintosh or PC models
- Transfer rate up to 1.4Mb per second
- 1 year warranty for Zip Drive
- Zip diskettes with limited lifetime warranty
- Zip Tools™ utility software

External £87 (£102.22 inc VAT)
100Mb disk £10 (£11.75 inc VAT)

jaz 1GB

Jaz has no limits. With 1Gb capacity per disk. Jaz is revolutionising storage technology.

- 1Gb capacity per disk
- Available as Macintosh or PC models
- Transfer rate up to 6.62Mb per second
- Jaz Tools™ utility software

External £232 (£272.60 inc VAT)
1Gb cart £60 (£70.50 inc VAT)

Special Offer Retrospect 3.0 only £69 (£81.07) when purchased together with a Zip or Jaz drive, a saving of £56

iomega.

ClarisWorks INTERNET EDITION £70 (£82.25 inc VAT)

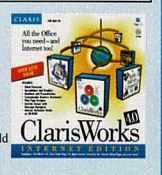
CLARIS

ClarisWorks 4.0 Internet Edition provides a full set of office productivity and Internet software to handle office needs.

- **All the office you need**
  Combine word processing, spreadsheet, charting, presentation, graphics and paint tools all on a single page.
- **40 customised small business templates**
  Create brochures, newsletters, advertisements, financial statements and more.
- **Easy Internet access and reference books**
  Get on the Internet in minutes via a selection of Internet service providers and Netscape Navigator. The ABC's of the Internet and Internet Yellow Pages books on CD-ROM take advantage of the fast resources available on the Net.
- **Create web pages with Claris Home Page 2.0**
  Create and publish dynamic web pages in minutes without having to learn HTML or programming
- **Powerful word processing for professional results**
  Layout forms and complex documents, customise tabs, margins, indents, line spacing and so forth.
- **Spreadsheets and charts bring numbers to life**
  100 built-in functions let you analyse data using multiple options. Chart data with 12 chart types, add colour, 3D effects, gradients and labels for complete formatting

Package Contents

- ClarisWorks 4.0
- Claris Home Page 2 .0
- Apple Connection Kit 2.0 Internet Yellow Pages ABC's of the Internet books on CD-ROM
- Internet Access



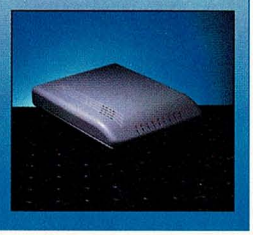
DABS DIRECT

Picasso 33.6

Voice, Fax, Data Modem

- External & PCMCIA format
- Includes Voice Fax & Data Software
- 33.6Kbps
- Designed & Built in the UK
- Internet Starter Kit Included
- 5 Years Warranty
- BABT & CE approved
- V32 & V34 (to 33.6Kbps)

£69 (£81.07 inc VAT)



NETWORKING

	ex VAT	inc VAT
APPLE		
BNC/TP Transceiver	34	39.95
AUI Transceiver	54	63.45
CommsSlot UTP/BNC	55	64.62
CommsSlot AUI	55	64.62
ASANTE		
UTP Transceiver	35	41.12
NuBus UTP Card	79	92.82
BNC Transceiver	38	44.65
NuBus BNC Card	85	99.87
UTP+BNC Transceiver	65	76.37
NuBus UTP+BNC Card	99	116.32
PCI Card	62	72.85
PCMCIA UTP	120	141.00
PCMCIA BNC+UTP	145	170.37
AsantePrint Print Server	195	229.12
ASANTE HUBS		
Plug & Play 8port + AUI + BNC	105	123.37
Plug & Play 12port + AUI + BNC	225	264.37
Plug & Play 24port + AUI	345	405.37
ASANTE FAST		
AsanteFast 10/100 PCI Card	145	170.37
AsanteFast 100 12 port Hub	1119	1314.82
DAYNA		
DaynaStar MiniHub5 5port	63	74.02
DaynaStar MiniHub8 8port	79	92.82
DaynaStar Hub-16 16port	275	323.12
BlueStreak 100baseTX 12port	989	1162.07

CARTRIDGES/DISCS/CD'S

	ex VAT	inc VAT
DISCS		
1.44Mb DSHD x 10 each	.50	0.58
1.44Mb DSHD x 100 each	.40	0.47
1.44Mb DSHD x 250 each	.35	0.41
650Mb CD Recordable x 1 each	3.50	4.11
650Mb CD Recordable x 10 each	3.20	3.76
650Mb CD Recordable x 100 each	3.00	3.52
650Mb CD ReWriteable x 1 each	22	25.85
650Mb CD ReWriteable x 10 each	21	24.67
650Mb CD ReWriteable x 100 each	20	23.50
DATA CARTRIDGES		
2Gb/4Gb 90m DAT	8	9.40
4Gb/16Gb 120m DAT	15	17.62
MO DISCS		
128Mb	8	9.40
230Mb	9	10.57
1.3Gb	59	69.32
2.6Gb	115	135.12
NOMAI SYQUEST CARTRIDGES		
44Mb 5.25"	22	25.85
88Mb 5.25"	23	27.02
200Mb 5.25"	35	41.12
SYQUEST ORIGINAL CARTRIDGES		
44Mb 5.25"	25	29.37
88Mb 5.25"	28	32.90
135Mb 3.5"	15	17.62
200Mb 5.25"	42	49.35
270Mb 3.5"	37	43.47
IOMEGA CARTRIDGES		
Zip 100Mb	10	11.75
Zip 100Mb 6pack	50	58.75
Jaz 1Gb	60	70.50
Jaz 1Gb 3pack	175	205.62

SOFTWARE

	ex VAT	inc VAT
ACCOUNTING		
Ritz Accounting	264	310.20
Ritz Median	129	151.57
Ritz Platinum	435	511.12
Ritz Platinum Plus	599	703.82
Ritz Payroll	135	158.62
Soft Numbers MYOB v6.0	142	166.85
BUSINESS		
Corel WordPerfect v3.51	105	123.37
Claris MacWrite Pro v1.5	45	52.87
Microsoft Excel v5.0	225	264.37
Microsoft Project v4.0	289	339.57
Microsoft Word v6.0	225	264.37
Now Up-To-Date v3.0	49	57.57
Route 66	34	39.95
Route 66 Ultimate Traveller	79	92.82
CAD		
GraphSoft MiniCAD v7.0	450	528.75
IDD MacDraft v4.2	225	264.37
COMMUNICATIONS		
CE QuickMail Pro 1u	45	52.87
CE QuickMail Pro 5u	139	163.32
CE QuickMail Pro 10u	269	316.07
Claris Apple Internet Connection Kit	45	52.87
Claris Emailer v2.0	38	44.65
Synergy Versatilities	56	65.80
Vicom Connect II	109	128.07

Excellent Quality • Superior Service • Unbeatable Value

Export Orders please call 01942 794040, and ask for our Export Division

Authorised Reseller

PRICE MATCHING
We can usually match other dealers prices. Please call for details

- ✔ Serving you since 1987
- ✔ Over £31m annual turnover
- ✔ Over 150,000 satisfied customers
- ✔ Highly trained specialist staff
- ✔ Repair & upgrade services

DABS DIRECT
PERSONAL COMPUTER SYSTEMS

SALES FAX 01942 797979 **WEB SITE http://www.dabs.com** **EMAIL macsales@dabs.com**

SOFTWARE continued

DATABASE

	ex VAT	inc VAT
ACI 4th Dimension v6.0	375	440.62
ACI 4D First	95	111.62
Claris FileMaker Pro v3.0	135	158.62
Microsoft Fox Pro v2.1	72	54.60

DTP & FONTS

Adobe Type Basic	79	92.82
Adobe Type-on-call	35	41.12
Adobe TypeManager	25	29.37
Adobe ATM Deluxe v4.0 CD	45	52.87
Adobe ATM Deluxe v4.0 FD	53	62.27
Adobe FrameMaker v5.1	439	515.82
Adobe **PageMaker v6.5**	339	398.32
Adobe Publishing Collection	796	935.30
Adobe Type Reunion	26	30.55
Adobe Type Set Value Pack	28	32.90
Adobe Wild Type	30	35.25
Altsys Fontographer v4.1	297	348.97
Extensis Page Tools	79	92.82
Extensis QX Tools	79	92.82
QuarkXPress v3.32	609	715.57
Softpress UniQuorn	236	277.30

GRAPHICS

Adobe Acrobat v3.0	136	159.80
Adobe AfterEffects v3.0	448	526.40
Adobe AfterEffects Pro v3.0	902	1059.85
Adobe Beeline	92	108.10
Adobe Dimensions v3.0	87	102.22
Adobe Graphics Collection	485	569.87
Adobe **Illustrator v7.0**	249	292.57
Adobe Persuasion v3.0	208	244.40
Adobe PhotoDeluxe	68	79.90
Adobe **Photoshop v4.0**	339	398.32
Adobe Premiere v4.2	335	393.62
Adobe Publishing Collection	796	935.30
Adobe Screenready	98	115.15
Adobe Streamline v4.0	87	102.22
Adobe TextureMaker	90	105.75
Alien Skin Eye Candy v3.0	75	88.12
Broderbund Incredible Image Pack	22	25.85
Claris Draw v1.0	89	104.57
Claris Impact v2.0	89	104.57
Connectix Photomate	29	34.07
Corel Draw Suite	249	292.57
Deneba Canvas v5.0	295	246.62
Equilibrium Debabelizer Lite	83	97.52
Equilibrium Debabelizer	260	305.50
Extensis Draw Tools	79	92.82
Extensis Fetch v1.5	79	92.82
Extensis Intellihance v2.0	315	370.12
Extensis Photo Tools	79	92.82
Fractal Dabbler v2.0	24	28.20
Fractal Detailer	255	299.62
Fractal Expression	119	139.82
Fractal Painter v4.0	214	251.45
Fractal Poser v2.0	137	160.97
Fractal RayDream Add Depth v2.0	44	51.70
Fractal RayDream Designer v4.0	115	135.12
Fractal RayDream DreamPack	125	146.87
Fractal RayDream Jag II	44	50.70
Fractal RayDream Studio v4.1	269	316.07
Fractal Sketcher	55	64.62
GDT PowerPlot	240	282.00
GDT PowerPrint v3.0	69	81.07
GDT PowerPrint/LT v3.0	169	198.57
GDT StyleScript v3.0	72	84.60
Graymatter Screen Cafene Pro	99	116.32
MetaTools KPT Actions	44	51.70
MetaTools KPT Bryce v2.0	135	158.62
MetaTools KPT Bryce Accessory Kit	49	57.57
MetaTools KPT Convolver	89	104.57
MetaTools KPT Vector Effects	89	104.57
MetaTools KPT Final Effects v3.0	335	393.62
MetaTools KPT Final Effects AP	89	104.57
MetaTools KPT Power photos	89	104.57
MetaTools Kai's Power Goo	39	45.82
MetaTools Kai's Power Tools v3.0	85	99.87
MetaTools Soap	39	45.82
MetaTools Studio Effects	345	405.37
Live Picture v2.5	645	757.87
Macromedia Extreme 3D	369	433.57
Macromedia FreeHand v7.0	279	327.82
Macromedia FreeHand Graphics Studio	399	468.82
Macromedia Smart Sketch	45	52.87
Macromedia xRes v3.0	399	468.82
Microsoft Powerpoint	255	299.62
Quark Immedia	639	750.82
Quark Immedia/xPress bundle	986	1158.55
Specular Collage v2.0	79	92.82
Specular Infini-D v4.0	539	633.32
Specular LogoMotion v2.0	88	103.40
Specular TextureScape v1.5	98	115.15
Strata Clip 3D Library	99	116.32
Strata Fractal Terrain Modelar	58	68.15
Strata Instant Replay	67	78.72
Strata Media Paint	299	351.32
Strata Render Pro v2.5	138	162.15
Strata Studio Pro v2.0	595	699.12

INSIGNIA SOLUTIONS

Windows 95 For Power Mac

MacOS

Microsoft® WINDOWS™ COMPATIBLE

SoftWindows 95 for Power Macintosh

Includes Microsoft® Windows® 95

NEW VERSION 4.0 only £249 (£292.57 inc VAT)

Featuring TurboStart • Windows 95 Launch Accelerator

30% Faster
faster than hardware cards running on a fast Mac

Internet-ready
includes: Microsoft Internet Explorer™ support ActiveX™ and Java™

Runs all Pentium programs

For all Power Macs
the only solution for PowerPC PowerBooks™

SITUATIONS VACANT

MAC SALES EXECUTIVE

REF. AW/MAC

We are looking for a sales executive in our expanding Apple/MacOS telesales division. Ideally, you'll already be working or have worked in computer sales, and will have experience of Apple and related products, although PC-experienced people will be retrained. The successful candidate, will be working in a lively office and be part of a small team who are rewarded with a basic salary, commission and incentives. A total package of £16,000 is achievable, more if you bring business with you.

MAC GRAPHIC DESIGNER

REF. DW/PROD

We are looking for a QuarkXPress proficient Graphic Designer to join our busy Production department. The successful candidate will be working within a small team which is responsible for the production of all our advertising, general design and print requirements. Experience of Photoshop & Illustrator is an advantage but not essential. We are however looking for some creative input to layout, visuals and typography. Illustrative skills would not hurt either!

Salary for this position will be approximately £10,500 pa, plus company bonus currently running at over £1,000 pa.

Dabs Direct is a £33 million mail order computer reseller employing 90 staff from modern offices at Westhoughton. We are an equal opportunity employer.

Please send your CV stating previous salary (no telephone enquiries please) to arrive no later than 7th July 1997 and address your application (starting with the appropriate reference code) to... Strictly no agencies.

Personnel Manager, Dabs Direct
Direct House, 30 Wingates Industrial Park, Westhoughton, Bolton BL5 3XU

TERMS

Inc VAT figures are for illustrative purposes only. Inc VAT figures for EU residents, 17.5% VAT added to all prices (subject to change without notice)

We also supply many products not listed here. Export orders welcome, carriage charged at cost. Official orders accepted only from public sector/education/listed PLCs. Prices listed are CWO (cheques, cash, credit/debit card, postal order, bank transfer, bankers draft). Surcharge applicable on business cheques using ChequeSpread.

Finance/leasing available subject to status. Written details available upon request.

14 day credit terms available to public sector & quoted PLC's only.

Personal cheques over £1000 or without cheque card and business cheques which do not include ChequeSpread surcharge may take up to 14 days to clear.

Prices and manufacturers specifications subject to change without notification. Goods offered subject to being unsold. Goods not offered on a trial basis. All returns must have prior authorisation. Goods faulty on arrival will be replaced/refunded. After 28 days, goods will be repaired free of charge under warranty. All orders are subject to our terms & conditions, available upon request. E&OE [10.06.97].

RESTOCKING FEE CHARGED ON NON-DEFECTIVE RETURNS. **DUE TO CURRENCY FLUCTUATIONS ALL PRICES MAY CHANGE**

CARRIAGE

HARDWARE/SOFTWARE (PER ORDER)	ex VAT	inc VAT
Standard GB 1-3 working day Delivery	£10.00	(£11.75)
Next working day Delivery	£15.00	(£17.62)
N Ireland/Highlands/CI/IOM 1-3 Days	Call	(Call)
Saturday Delivery (Mainland GB)	£30.00	(£35.25)
SMALLER/LOWER VALUE ITEMS		
Standard UK 1-3 working day Delivery	£5.00	(£5.87)
Next working day Delivery	£7.50	(£8.81)

Call for quotes on other areas/times

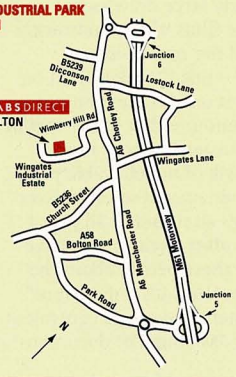
PRICES ARE PER ORDER NOT PER BOX. ALL DELIVERY TIMES SUBJECT TO CLEARED FUNDS, BEING IN STOCK AND UNSOLD.
PLEASE ADD VAT TO ALL PRICES.

IMPORTANT NUMBERS

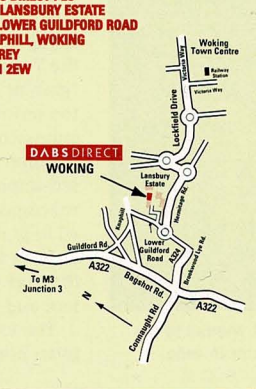
EDINBURGH	**Sales**	**0131-556 4114**
LONDON	**Sales**	**0171-582 4777**
BOLTON	**Sales**	**01942 794040**
	Fax	**01942 797979**
WOKING	**Sales**	**01483 797676**
	Fax	**01483 799510**
EXPORT	**Sales**	**01942 794040**
All Customer Services		**01942 794020**
General Tech Support (After Sales)		**01942 794230**

HOW TO FIND US

DABS DIRECT PLC
DIRECT HOUSE
30 WINGATES INDUSTRIAL PARK
WESTHOUGHTON
BOLTON
BL5 3XU



DABS DIRECT PLC
THE LANSBURY ESTATE
102 LOWER GUILDFORD ROAD
KNAPHILL, WOKING
SURREY
GU21 2EW



SOFTWARE continued

GRAPHICS continued

	ex VAT	inc VAT
Strata Type 3D v2.0	89	104.57
Strata Virtual 3D	135	158.62
Strata Vision 3D	145	170.37

INTEGRATED PACKAGES

Claris Works v4.0	87	102.22
MS Office v4.21 Student	70	82.25
MS Office v4.21	329	386.57
MS Works v4.0	72	84.60

INTERNET PUBLISHING

Adobe PageMill v2.0	61	71.67
Adobe SiteMill	135	158.62
CE Web Arranger	53	62.27
Claris HomePage v2.0	62	72.85
Claris Works Internet Edition	70	82.25
DataViz Web Buddy	42	49.35
Extensis CyberPress	119	139.82
GoLive CyberStudio	199	233.82
NetObjects Fusion	369	433.57
Specular Weburst	179	210.32
Symantec Java Café	105	123.37
SoftQuad Hotmetal Pro	99	116.32

MULTIMEDIA

Astound v2.03	145	170.37
Gryphon Morph v2.5	76	89.30
Macromedia Director v6.0	749	880.07
Macromedia Director MM Studio v6	819	962.32

OCR

Caere OmniPage Direct v2.0	65	76.37
Caere OmniPage v7.0	315	370.12
Xerox TextBridge v3.0	29	34.07
Xerox TextBridge Pro v3.0	69	81.07

UTILITIES

Aladdin Stuffit Deluxe v4.0	59	69.32
Cassidy Conflict Catcher v4.0	46	54.05
Cassidy SnapMail v2.0 5u	135	158.62
Cassidy Spell Catcher	47	55.22
Claris Organiser v1.0	45	52.87
Central Point Mac Tools Pro v4.0	78	91.65
Connectix RAM Doubler v2.0	39	45.82
Connectix Speed Doubler	38	44.65
Dantz Restrospect	69	81.07
Dantz Retrospect Remote	129	151.57
Datawatch Virex	55	64.62
Datawatch Virex with subs	127	149.22
Farallon Timbuktu Pro	185	217.37
FWB HD Toolkit Personal	43	50.52
FWB HD Toolkit	99	116.32
FWB SpaceMaker	43	50.52
FWB Turbo Toolkit	43	50.52
Highwire FileGuard	125	146.87
Highwire Popup Folder	29	34.07
Insignia Mac transfer	39	45.82
Insignia SoftWindows 95 v4.0	249	292.57
Now Contact/Up to Date	50	58.75
Now DateBook & TouchBase	45	52.87
Now Utilities v6.0	50	58.75
S&S Dr Solomons AntiVirus	45	52.87
Software Architects DOS Mounter 95	65	76.37
Steinberg Cubase VST v3.0	219	257.32
Steinberg Cubase Score VST v3.0	319	374.82
Software Architects Formatter v5.0	110	129.25
Synamtec DiskDoubler	49	57.57
Symantec Norton Utilities v3.5	66	77.55
Symantec SAM v4.5 no subs	47	55.22
Symantec SAM v4.5 with subs	92	108.10
Symantec Suitcase v3.0	47	55.22

SOFTWARE UPGRADES

ADOBE

	ex VAT	inc VAT
Acrobat v3.0 VU	49	57.57
Illustrator v6.0 VU	128	150.40
Illustrator v5.5 - v6.0	93	109.27
PageMaker VU	93	109.27
PageMill v2.0 VU	35	41.12
PageMill - SiteMill	75	88.12
Photoshop v4.0 VU	139	163.32

INSIGNIA

SoftWindows 95 v3.0 - v4.0	69	81.07
SoftWindows v3.0 - 95 v4.0	119	139.82
SoftWindows v1.0/v2.0 - 95 v4.0	119	139.82

MACROMEDIA

FreeHand v5.5 - v7.0	145	170.37
FreeHand v7.0 CU	215	252.62
Freehand Graphics Studio v7.0 VU	175	205.62
Director Multimedia Studio VU	419	492.32

MICROSOFT

Office v4.2	169	198.57
Office v4.2 Claris CU	169	198.57

XEROX

Textbridge Pro v3.0	49	92.82

Please call for other upgrades.
We usually require the previous version serial number before ordering your upgrade

Excellent Quality • Superior Service • Unbeatable Value

Open 9.00am to 5.00pm Monday to Friday • 10.00am to 3.00pm Saturday

PRICE	£29.99	**ON SALE**	Now	**CONTACT**	Tring International on 01296 615511	**WEB SITE**	http://www.gzone.com/
MAC	**Processor:** 68040 • **RAM:** 5Mb	**POWERMAC**	**Processor:** any • **RAM:** 5Mb	**REQUIRES**	**System:** 7.0.1 • **Screen:** 640 x 480 • **Colours:** 256 •		
Extras: 2x speed CD-ROM drive • modem (for optional on-line link)							

The Crow

The Complete Interactive Collection

Dig out your old Cure records, stick on that black fright wig and wail mournfully as we delve into the happy little world of the *The Crow*.

This is not, as you're probably relieved to hear, an in-depth look at the genus Corvus, but rather a multimedia spin on any self-respecting Goth's favourite comic book character. *The Crow* was dreamt up by artist James O'Barr, who wrote the first stories back in 1981, though they weren't published until 1988. Since then, it's gathered the inevitable cult following and had two films based on it.

This much, and a whole lot more, can be learnt from the James O'Barr section of this CD. *The Crow* uses a rendered QuickTime VR chapel as its main menu, with various hot-spots of interest scattered about. Seven main stained windows, happily labelled Pain, Lament, Attrition and so on, take you through the story of *The Crow*, using video clips from the film, original drawings, the odd interview, and selected parts of the film's soundtracks (plus bad lyrics). Each section is divided into sub-sections, with each of these screens containing clickable hot-spots.

The Skull Cowboy character was cut from the first film. Perhaps they were working with a skeleton staff...

It has to be said, *The Crow* isn't the cheeriest of stories. Potted synopsis: rock star Eric Draven is killed while trying to rescue his fiancée Shelly from being raped by a gang, whom they also leave for dead. A year later, unable to rest in peace, Draven is brought back to life by, er, a crow, and sets about murdering the gang one by one. As he gets madder and more violent, he realises he's no better than them but is unable to stop. With justice served, he can once more return to (an undoubtedly rather surprised) Shelly and "live" in peace, at least until the sequel. Imagine *Death Wish* with an indie soundtrack and you're not far off.

It's typical modern comic book fodder, then, with a sort-of anti-hero and justice winning out. Both the comic and film are dark and violent in that by now clichéd *Bladerunner* way, and the CD embraces this ethos wholeheartedly. With the indie soundtrack gurgling in the background, it's pleasant enough to click around for a while and unearth the decent video clips here and there (including rough cuts of the second film).

Elsewhere, there's the aforementioned biography of O'Barr with short interviews, information on cast and credits, more about the graphic novel, some "never before seen" cut footage, and more interviews with the stars. There's also a special section for Brandon Lee, son of legendary kung fu star Bruce Lee, who was bizarrely killed in an accident during filming. Life imitating art, or something.

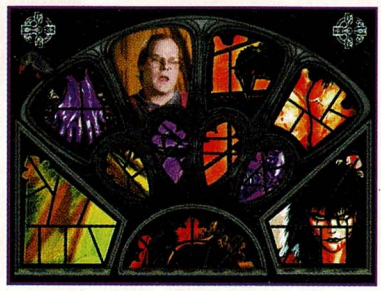
The Crow is a fine example of modern multimedia, mixing a number of sources in a slick, intuitive way. The video is fine (though a few name subtitles would have helped), the comic art well-scanned, and the soundtrack even manages to keep in time with the pictures. Best of all, there are no loooong pauses while something loads, and you can always escape if you want to. Admittedly, some of the text is blatantly hagiographic, for example unearthing the startling fact that, for authenticity, O'Barr sometimes uses *real* street signs in his drawings! Phew!

Eric discovers there's more to life than being dead, thanks to his crow pal. And so begins the endless torment. Repeat to fade.

Funny ha ha?

There is one fairly large drawback, though. Like the films, the soundtrack, the T-shirts, and the comic – sorry, "graphic novel" – this CD takes itself far too seriously. Not once is there anything approaching humour either in the text or the interviews; instead, there's much self-important talk of unbelievable pain, redemption, madness and so on, delivered in grave tones all round. It all gets a little bit tedious after a while; you have the urge to slap these people about the face and scream, "Hey, it's only a film!"

The total content is perhaps equivalent to an hour-long "Making Of" documentary, which can't be bad. Nevertheless, you'll have to be something of a *Crow* fanatic in the first place to endure all that pompous anguish. Ideally, you'll be younger than 25, disenfranchised, a big fan of Nine Inch Nails and think that Kurt Cobain is a saint. **ED RICKETTS**

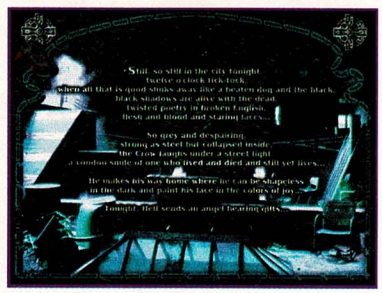


This is he, the fella behind the original *Crow* comics. He appears to have fallen asleep here, but then he is getting on a bit.

The Crow

Don't even think of browsing unless you're a real *Crow*-head. Otherwise, packed with well-presented, easily-accessible material.

MF rating 80%



Ah yes, I remember sixth-form poetry, too. It's just that some people seem to make a living out of it.

Another arty montage thing with a video sequence playing. It's all very dark and meaningful. Apparently.

What's more...

British director Tim Pope, who directed the second *Crow* film *City of Angels*, has also made numerous videos for top Goth band The Cure. Oh, and David Bowie too.

PRICE	£11.99	**ON SALE**	Now	**CONTACT**	Electronic Arts on 01753 549442	**WEB SITE**	http://www.foxinteractive.com/
MAC	**Processor:** 68040 • **RAM:** 8Mb	**POWERMAC**	**Processor:** any • **RAM:** 8Mb	**REQUIRES**	**System:** 7.1 • **HD space:** 8Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** 2x speed CD-ROM drive		

Inside Independence Day

A bit late, perhaps, but here's the making of the book of the documentary of the T-shirt of *the* big film of last year. Is it any better, though?

Hype can be a dangerous tool in the right hands. In the hands of Hollywood, it's deadly. The big H outdid itself with the furore surrounding *Independence Day* before its release; to listen to the build-up, you'd believe that *iD4* (as it's also known) could cure cancer. Instead, we got a cheesy, badly acted, hilariously scripted and expensive B-movie with so-so special effects.

Fortunately, this multimedia look behind the scenes isn't quite as vacuous as the film. In fact, it's stuffed with enough paraphernalia to satisfy the most avid *iD4* fan: 750 storyboard illustrations, 500 production stills, 150 bits of pre-production art, eight clips from the film, numerous interviews, history, tech notes and more.

This panoply of hype is accessed through a rather unimaginative menu screen. For no reason in particular, navigating through the sections is extremely slow; there's a half-second pause after clicking before anything happens, enough to make you click again to be sure.

Initially, the controls are a little confusing, with icons for everything and befuddling arrows pointing all over the place. Once you're used to it, though, you'll find the various sections are very thoroughly cross-referenced. So, for example, if you're browsing through a part of the film's storyboard, you can click at any time to see the relevant clip. Similarly, clicking on a concept sketch shows you a photo of the resultant real-life object, if one is available. You can, for instance, see the concept of the aliens, and then a photo of the finished product.

As you might expect, the interviews with the stars are not exactly revealing. You can choose which questions to ask by clicking on them, but they're typical PR fodder, along the lines of: "What do you think of director Roland Emmerich?" "Roland's a great guy, he really understands actors," and so on. Still, it's amusing to hear veteran actors such as Robert Loggia trying to elaborate on their one-dimensional characters. A separate biography section gives surprisingly detailed background on all the major actors' previous roles.

By far the most interesting section is Tech Notes, which gives you a lot of background on the huge amount of work that went into the film's special effects. Although a lot of them were computer generated effects, there was also a large number of logistical problems to solve, such as how to flip over a car precisely and repeatedly without hurting anyone. There are photos to accompany the text, but a few video sequences here would have been nice, perhaps at the expense of fewer anodyne stars' talking heads.

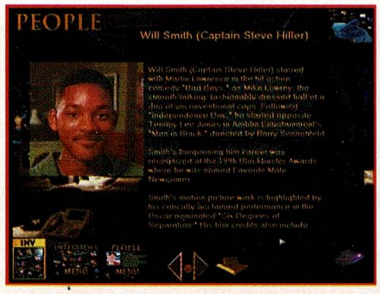
Somewhat worryingly, the so-called History section (which provides background information on alien activities), routinely accepts Roswell, Area 51 and other paranoia as solid fact. You'll also find known fake photos and obvious coincidences referred to in awed tones as evidence. Suppose it was too much to ask for a little impartiality.

The video clips are fairly lengthy, and naturally focus on the action sequences from the film. In fact, this is probably the best way of appreciating *Independence Day* for what it is: a series of spectacular special effects without all that turgid "story" getting in the way. Sadly, Bill Pullman's hilariously, er, stirring pre-take-off speech is absent; maybe they weren't bold enough to serve it up again with a straight face. The video window is fairly small, and though you can enlarge it, this just stretches the picture and leaves you with disortion.

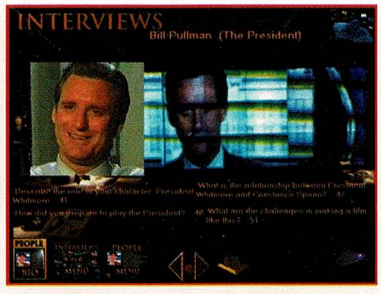
Inside Independence Day is a decent enough job, and a lot better than it had any right to be. There really is a lot of material here you could come back to after watching the film again, just to see how they did it. It's more functional than slick, but that's no crime, especially with something this content-heavy. Anyway, it's a hell of a lot better than the *Independence Day* game, which fortunately never made it to the Mac. Now, if you're talking of B-movies... **ED RICKETTS**

Bang! Boom! Aaargh! Repeat 60 times and you have *Independence Day*. A typical clip from the film, this.

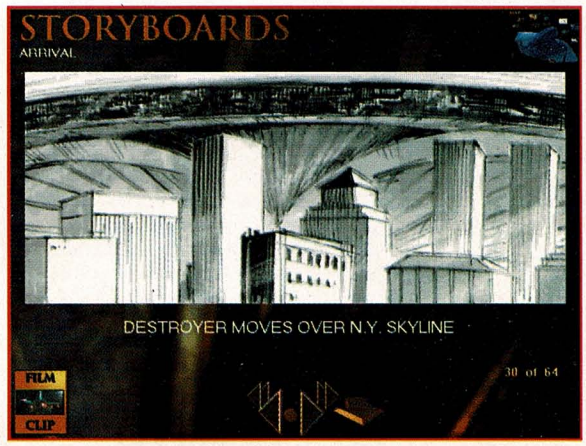
Oh my God! It's a real-life picture of... of... a cloud! The other photos included are equally risible.



The biography text is somewhat fawning, but it does at least give a listing of the actors' previous films and achievements.



Good ol' Bill Pullman, always smiling. Have you noticed he's been in hundreds of films lately? Here, you see the Interview section.



Comparing the original storyboard to the finished product is always interesting, but it does get a little bit dull after a while. They're much the same.

Loving the alien

Last year porn king Bob Guccione published "exclusive" pictures of an alien body in *Penthouse*, for which he'd paid a fortune. Unfortunately, unknown to him, the "alien" had been created as a special effect for the TV film *Roswell* and is on display at a UFO museum. Oops.

Jeff Goldblum relaxes during a break in filming.

Inside Independence Day

Certainly more engaging than the film itself, and it'll hold your interest for longer. Even non-fans could be tempted by this.

MF rating 80%

PRICE £11.99	**ON SALE** Now	**CONTACT** Electronic Arts on 01753 549442				**WEB SITE** http://www.foxinteractive.com/	
MAC **Processor:** 68040 • **RAM:** 8Mb		**POWERMAC** **Processor:** any • **RAM:** 8Mb		**REQUIRES** **System:** 7.1 • **HD space:** 20Mb • **Screen:** 640 x 480 •			
Colours: 256 • **Extras:** 2x speed CD-ROM drive							

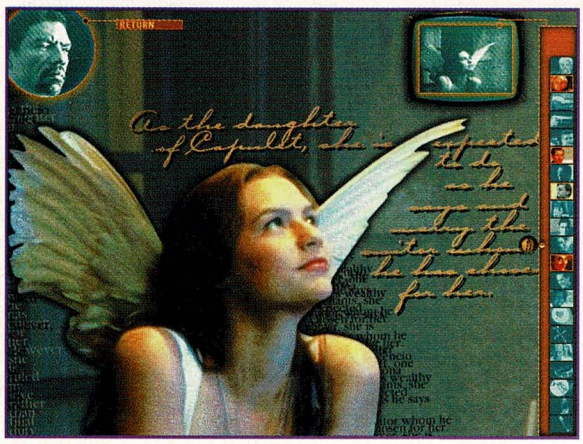
Romeo & Juliet

These particular star-cross'd lovers are more likely to be wearing knuckle-dusters than doublets and hose. Whatever would Will have said?

The full title of this disc (and recent film) is *"William Shakespeare's Romeo and Juliet."* I really, truly hope this was not put in for the benefit of the American market, to ensure they wouldn't get confused with another Romeo and Juliet by someone more famous like Tom Clancy. But I doubt it.

Despite being a somewhat radical departure from the usual "luvviedom" of Shakespeare, this latest version of *Romeo & Juliet* has gained mostly excellent reviews since its release. Directed by Australian Baz Luhrmann, it keeps precisely the original dialogue, but transports the action to a mythical place called Verona Beach, somewhat like Los Angeles, but not identical.

Here, the two houses of Montague and Capulet are rich merchants as usual, but they drive huge, inefficient cars and speak with American or Spanish accents. Gang fighting is rife, guns are freely available to anyone who can afford a licence, and honour is paramount. Those who aren't rich are illiterate and live in squalor. The film uses a grinding soundtrack from artists such as Radiohead and, if it weren't for the dialogue, it could easily be the next Robert de Niro flick.



Here she is, the lovely Juliet. Those wings are symbolic, or something. It's not *that* weird a film.

The story, screenplay-style. From here, you can flip backwards and forwards between screenplay and play, though you can't see both at the same time.

The cast of characters can be accessed at any time, along with descriptions of how they relate to others in the story.

As you can see, the setting is very authentically Shakespearean. Ahem. And the interface is a more than a bit confusing...

Like the film, this CD is a visual assault from the start. It's also immensely confusing. When you first load up, a sort of slideshow begins, retelling the film using stylised stills, clips of dialogue, and a musical soundtrack. You can drag a slider to move the action forward or back, and a short label enables you to see what's going on at each point. This is vital, because unless you know the story, you won't have a clue what's happening.

Yep, this is the quality of the video. Arty knowingness or just bad programming? You decide.

Often, the dialogue is difficult to make out, but it's not always the CD's fault. The actors speak quickly, and with various accents; the sound quality isn't all that great; and there's usually some loud music playing in the background at the same time. At least you can replay bits here, which is more than can be said of watching the film at a cinema.

When a major character appears, their icon pops up on screen. Clicking this takes you to a sub-menu of the cast, where you can dig into their relationships and see a fairly lengthy video clip of them in action. The video quality is dire, jerky and grainy, though – but still just about watchable.

Another sub-menu, also accessed through the confusing (but stylish) interface, enables you to compare the screenplay with the complete text of the original play. But the best part of this CD is the so-called Prologue, which should be the first thing you see instead of being hidden away in an obscure backwater.

Here you can find a series of illuminating articles explaining the background to Verona Beach, its culture, the two houses, why guns are so prevalent, and so on. It's like having Baz Luhrmann sit down and tell you just how he's transformed an Elizabethan play to this modern setting – it goes much further than just the accents. Reading this gives you a greater insight into the considerable detail that the film possesses, which you might otherwise miss. This is something that's best read *before* you see the film.

Also in the Prologue is a selection of music from the soundtrack, though you don't get the entire song and the artist isn't identified. You can also read through the *actual* prologue to the play, which is adorned with icons. Drop these icons onto three brass pendants in various orders and you'll uncover further stills from the film, plus production pictures. Sounds weird, and it is weird – arty design for the sake of it.

Romeo & Juliet almost falls into the old trap of being the multimedia equivalent of a coffee-table book: lovely to look at, but not much going on. Apart from the background texts and the screenplay (which isn't too easy to read on screen anyway), the whole thing is a collection of arty visuals and jarring sounds. It's always confusing in that trendy, tiresome art-house way, too, leaving you slightly bewildered. But hey, it makes Shakespeare radical and brings it to the kids, like, yeah?

ED RICKETTS

William Shakespeare's Romeo & Juliet

Heavy on the visuals, and perhaps not quite enough substance to back it up. Should be supplied as standard with the film, though.

MF rating 69%

☎ 01723 582100

Sales fax: 01723 582141
macsales@macgold.com
www.macgold.com
Mon - Fri 9am-8pm Sat 10am-6pm Sun 10am-4pm

PRICES INCLUDE VAT & DELIVERY

MacGold Direct

...Celebrating 4 years of Excellence 1993-97

DELTA · EUROCARD · MasterCard · SWITCH · VISA · TRANSAX

Applications

Prices INCLUDE UK delivery

ex VAT inc VAT

Accounts

	ex VAT	inc VAT
Best Books	68.04	79.95
MacMoney	65.49	76.95
MYOB Accounts 6.0	136.13	159.95

Utilities

	ex VAT	inc VAT
Aladdin Desktop Tools	48.47	56.95
Conflict Catcher 4	52.72	61.95
DataSaver	31.45	36.95
DiskExpress II	55.28	64.95
DiskGuard	68.04	79.95
FileGuard 3.0	123.36	144.95
FWB CDROM Toolkit v2.0.5	46.77	54.95
FWB Hard Disk Toolkit Personal 2	46.77	54.95
FWB Hard Disk Toolkit 2	102.09	119.95
Now Utilities 6.5 (& 3.5")	63.79	74.95
Norton Utilities 3.5 NEW	75.70	88.95
Personal Backup	30.60	35.95
Popupfolder 2	28.04	32.95
Ram Doubler 2	36.05	42.95
Ram Doubler 2 upgrade	27.19	31.95
Speed Doubler 2	39.11	45.95
Spell Catcher	50.17	58.95
SpringCleaning	28.89	33.95
Stuffit Deluxe 4.0 inc Spacesaver	66.34	77.95

Applications

	ex VAT	inc VAT
Adobe Dimensions 3	99.53	116.95
Adobe Pagemaker 6.5 Upgrade	100.38	117.95
Adobe Photoshop 4 Upgrade	153.15	179.95
Bryce Accessory Kit	58.68	68.95
Claris Organiser 2.0	58.68	68.95
ClarisWorks 4.0 Internet	84.21	98.95
ClarisWorks 4.0 Internet (Academic)	76.55	89.95
CorelDraw 6 Suite	246.77	289.95
Eye Candy 3.0	85.10	99.95
Info Genie 2.0	42.51	49.95
Key CAD Complete	25.49	29.95
KPT Actions	46.77	54.95
Language Assistant French, German, Italian, or Spanish	25.49	29.95
MacOS 7.6	59.53	69.95
Mavis Beacon Teaches Typing 5.0 NEW	25.49	29.95
Power Translator French, German or Spanish.....LOWER PRICE	51.02	59.95
Route 66 UK & Eire	22.94	26.95
SOAP MetaCreations	47.62	55.95
SoftWindows 95 v4 ACADEMIC	208.47	244.95
SoftWindows 95 v4 (PPC)	285.06	334.95
SoftWindows 95 Upgrade to v4	110.60	129.95
Video Director Studio 2000	229.75	269.95

DTP & Clipart

	ex VAT	inc VAT
ClickArt 65,000 Images (& 2000 fonts)	34.00	39.95
Corel Mega Gallery 110,000 Images	38.26	44.95
Corel Gallery	17.83	20.95
Corel Gallery 2	25.49	29.95
Corel Printhouse v1.1	19.53	22.95
MasterJuggler Pro 2.0 (3.5")	51.02	59.95
Printshop Deluxe (3.5")	25.49	29.95
Suitcase 3	57.83	67.95

Internet & Comms

	ex VAT	inc VAT
Adobe Pagemill 2.0	66.34	77.95
Adobe Pagemill 2.0 upgrade	45.06	52.95
Claris E-m@iler 2	47.62	55.95
Claris Home Page 2.0	76.55	89.95
Fax STF 3.2	59.53	69.95
WebWhacker	42.51	49.95

Anti-Virus

	ex VAT	inc VAT
Dr Solomons Anti Virus	70.60	82.95
SAM v4.5 (3.5")	59.53	69.95
Virex 5.7 with Speedscan	63.79	74.95

APPLE MEMORY

30pin SIMMS • 72 pin SIMMS
168 pin DIMM • Level 2 Cache • VRAM
BRANDED & UNBRANDED
Call for latest prices

Zip Disks

	1	5	10
IOMEGA brand	12.49	57.95	107.95
SONY brand	13.49	63.95	119.95

EZ135 Carts

	1	5	10
SyQuest brand	17.95	84.95	158.95
d2 brand	16.95	79.95	149.95

EZ230 Flyer carts

	1	5	10
SyQuest brand	25.95	109.95	189.95

Verbatim CD-R

	1	5	10
74 min CD-R	7.95	34.95	-

How to Order from MacGold

- Salesline 01723 582100 Faxline 01723 582141
- E-mail macsales@macgold.com
- http://www.macgold.com
- Prices INCLUDE vat @ 17.5% (ex VAT prices are also shown for Applications & Utilities and Accessories to help you compare our low prices).
- All prices INCLUDE delivery in the UK
- OPTIONAL next working day delivery is £4.95
- **Duke Nukem & Quake offer** includes next **working** day delivery in the UK. [Only applies to orders received after 3rd July.] This means deliveries can only be made Monday to Friday. This next day delivery **may** not be possible for some remote or offshore destinations, please ask when ordering.
- International shipping is charged at cost
- Credit cards are not charged until goods shipped
- **Please ensure that software is compatible with your computer equipment before ordering as goods are not supplied on a trial basis.**
- Prices and availability may change without notice. Latest information is available on the Web Site. Prevailing prices are always confirmed with you when ordering. Advert valid until 31.7.97. E & O E.
- **ORDERING BY MAIL** - Check price & availability by phone BEFORE ordering. Make cheques payable to "MacGold Direct Ltd". Send to MacGold Direct Ltd., P.O. Box 63, 115 High Street, Scarborough, YO11 3YW. Cheques take 5 working days to clear. Same day cheque clearance by TRANSAX costs as little as £1.20 for an order under £100 - call for details.
- All sales are subject to our terms & conditions of sale which do not affect your statutory rights.

EDUCATION & LEARNING

Educational prices inc VAT & delivery

Anglia Multimedia

Exploring Geography [7-16]	22.95
includes - The World's Weather, British Isles from the Air, and World Population Atlasfile	
Exploring History [7-14]	22.95
includes - Nelson & His Navy, Exploring Castles and, Industrial Revolution	
Exploring Reading 1	19.95
Exploring Reading 2	19.95
Exploring Science [7-14]	22.95
includes - Understanding the Body, Understanding Energy and, Being a Scientist	
Exploring Wildlife [7-11].	22.95
includes - Seashore Life, Survival Mysteries of Nature and, Garden Wildlife	

Broderbund

Arthur's Birthday [6-10]	22.95
Arthur's Teacher Trouble [6-10]	22.95
Dr Seuss Green Eggs and Ham [3-7]	21.95
Harry and the Haunted House [3-8]	23.95
Just Grandma and Me [3-8]	23.95
Living Books Bundle - Ruffs Bone, Dr Seuss ABC, New Kid on the Block & Berenstain Bears Fight	39.95
Ruffs Bone [3-8]	21.95
Tortoise and the Hare [3-8]	23.95

Creativity

Crayola Art Studio 2 [3-12]	33.95
Creative Writer & Fine Artist	40.95
Kid Pix Studio [3+]	23.95
Kid Works Deluxe [4-9]	23.95
Orly's Draw A Story [5-11]	25.95
Printshop Deluxe (3.5")	29.95
Magic Artist Disneys Draw & Paint	38.95
Simpsons Cartoon Studio	25.95
Storybook Weaver Classic	16.95

Disney CDROM

All Disney products are official UK versions

101 Dalmations Storybook [3-7]	31.95
101 Dalmations Print Studio	31.95
Aladdin Activity Centre [5+]	33.95
Lion King Activity Centre [up to 10]	30.95
Lion King Animated Storybook [up to 9]	32.95
Pocahontas Animated Storybook [up to 9]	32.95
Toy Story Animated Storybook [3+]	30.95
Toy Story Activity Centre [5+]	31.95
Winnie the Pooh & Honey Tree [3-8]	31.95

Dorling Kindersley

All DK titles are UK versions NOT imports

Castle Explorer	19.95
Childrens Multimedia Dictionary [8-12]	19.95
Chronicle of the 20th Century	24.95
Encyclopaedia of Space & Universe	26.95
Eyewitness Encyclopaedia of Nature	24.95
Eyewitness Encyclopaedia of Science 2.0 [12+]	24.95
History of the World	23.95
Jolly Post Office [4-8]..... NEW	23.95
My Amazing World Explorer Activity Pack [4-9]	21.95
My First Incredible Amazing Dictionary Activity Pack	19.95
PB Bears Birthday Party	19.95
Stowaway	19.95
Ultimate 3D Skeleton	19.95
Ultimate Human Body 2.0 [10+]	24.95
Virtual Reality Cat	19.95
Virtual Reality Bird	19.95
Virtual Reality Dinosaur Hunter	19.95
Virtual Reality Earth Quest [8+]	19.95
Way Things Work 2.0	24.95
World Reference Atlas	31.95

Edutainment

Fisher Price Great Adventures Pirate Ship [4-8]	23.95
Fisher Price Learning in Toyland [3-8]	21.95
Fisher Price Ready for Pre-School [2-4]	29.95
Fisher Price Ready for School [3-6]	29.95
Henry's Party - The Farmyard [3-8]	17.95
Jump Ahead - Discovery Tree [4-8]	24.95
Jump Ahead - Pre-School [3-4]	24.95
Jump Ahead - Toddlers [1.5-3]	18.95
Kids Time Deluxe [3-8]	32.95
Lost Mind of Dr Brain 3 [12+]	22.95
Marty & The Trouble With Cheese [2-5]	**14.95**
Marty Where's Morgan & Trouble with Cheese [2-5]	24.95
Mavis Beacon Teaches Typing 2	37.95
Muppet Treasure Island	24.95
Putt Putt Joins The Parade [3-8]	23.95
Putt Putt Saves the Zoo	32.95
Sim Town CD [8-12]	16.95
Time Warp of Dr Brain	25.95
Treasure Hunt [4-9]	18.95

English Language

Grammar Games (3.5")	27.95
Reading Maze [3-7]	39.95
Spell It 3 [6 to adult]	24.95

Geography

3D Atlas 97	28.95
Backpacker	33.95
Carmen San Diego Jr Detective [5-8]	19.95
Where in the World is Carmen San Diego [9+]	19.95

History

Ancient Lands Microsoft	24.95
Oregon Trail Classic	16.95
Origins of Mankind	29.95
The Times - Perspectives World War One	35.95
The Times - Perspectives World War Two	35.95
Where in Time is Carmen (3.5")	19.95

Interactive Storybook

Casper Brainy Book	23.95
Darby the Dragon [5-10]	16.95
Dragons [5-10]	16.95
Fish Who Could Wish	15.95
Gregory & the Hot Air Balloon [5-10]	15.95
Haunted House Jan Pienkowski [4+]	19.95
Playtoons 1-5 Series [4-10]	16.95
Winnie the Witch [5-10]	16.95

Iona

A to Zap	13.95
Amazing Maths [8-12]	13.95
Bailey's Book House [2-6]	13.95
Mighty Maths Carnival Countdown [4-8]	18.95
Mighty Maths Number Heroes [8-12]	18.95
Muppets Beginning to Read [3-7]	13.95
Muppets Read Listen and Learn [3-7]	13.95
Sammy's Science House [2-10]	13.95
Stanley's Sticker Stories [3-7]	13.95
Thinkin' Things [4-8]	13.95
Thinkin' Things 2 [6-12]	13.95
Thinkin' Things 3 [8-16]	13.95
Trudy's Time & Place House [3-8]	13.95
Type to Learn	13.95

Languages

Berlitz Think & Talk French, German or Italian	64.95
Easy Language 17 - learn 17 languages!	30.95
Ecoutez Bien (2 CD set)	44.95
Learn French with Asterix & Son (2 CD set)	45.95
Learn Spanish with Asterix & Son (2 CD set)	45.95
Oxford Language Shelf (& 3.5")	19.95
Multimedia Flashcards Series [ages 4-12]: Learn French, Spanish, Irish, Italian, American English, Arabic, Chinese, Danish, Dutch, English, Finnish, Greek, Hebrew, Hungarian, Japanese, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish, Welsh, or German	each Call
Talk Now Series for Beginners: Learn French, Spanish, Irish, Italian, American English, Arabic, Chinese, Danish, Dutch, English, Finnish, Greek, Hebrew, Hungarian, Japanese, Latin, Norwegian, Portuguese, Polish, Russian, Swedish, Turkish, Welsh, or German	each 23.95
Transparent Language Series v5.0 [ages 12+]- French; German, Italian, Latin, Russian, Spanish or Portugese	59.95
Transparent Language : Talking Translation Dictionary	38.95

Maths

Alge Blaster 3 [12+]	25.95
Decimal & Fraction Maze [10+] (3.5")	39.95
Kid Math [3-8] (3.5")	33.95
Logical Journey of the Zoombinis [8+]	23.95
Math Blaster in Search of Spot [6-12] (& 3.5")	26.95
Math Blaster Junior [4-7]	24.95
Math Blaster Mystery [10+] (3.5")	24.95
Maths Workshop [6-12]	22.95
Mega Math Blaster [7-12] (PPC)	24.95
Number Maze [5-12]	37.95
Revise for GCSE Mathematics	16.95

Nature, Biology & Science

3D Dinosaur Adventure [3-10]	29.95
ADAM Inside Story 97	36.95
Amazon Trail Classic	16.95
Dangerous Creatures - Microsoft	24.95
Dinosaurs - Microsoft	24.95
Leonardo the Inventor	18.95
Magic School Bus Explores the Oceans [6-10]	24.95
Magic School Bus Explores the Human Body [6-10]	24.95
Mr Wonders Greatest Toyshop [4-8]	19.95
Nine Month Miracle ADAM	26.95
Oxford Science Shelf (& 3.5")	19.95
Revise GCSE Biology, Chemistry or Physics . each	16.95
Solar System Explorer	32.95
Where in Space is Carmen San Diego? (3.5")	19.95

REFERENCE

Encarta 96	44.95
Encyclopaedia Britannica 97	299.95
Grolier 1997 Encyclopaedia	37.95
King James Bible	19.95
Oxford English Dictionary	229.95
Oxford Reference Shelf	35.95
Oxford Study Shelf (&3.5")	17.95
Oxford Writers Shelf (& 3.5")	16.95

TRAINING SOFTWARE

Quay 2 titles available. More VTC titles available:

VTC Training - ClarisWorks 4.0	35.95
VTC Training - Filemaker Pro 3.0	35.95
VTC Training - Freehand 5.5	35.95
VTC Training - Illustrator 6	35.95
VTC Training - DTP Basics	35.95
VTC Training - Pagemill 2.0	35.95
VTC Training - Photoshop 4.0	35.95
VTC Training - Photoshop Filters	34.95
VTC Training - QuarkXPress 3.3	35.95

On the web

Our **DOUBLE AWARD WINNING** website is now bigger than ever! Find out first about new releases; browse hundreds of full product descriptions; take a look at the products themselves; and, purchase using SECURE online ordering.

Add a bookmark for
http://www.macgold.com

The site is updated daily and watch out for those *special ofers only available on our website*

Entertainment

3D Landscape 2	49.95
A Brief History of Time	31.95
Age of Rembrandt	27.95
Art Gallery & Musical Instruments - Microsoft	32.95
British Birds, The CDROM Guide	32.95
Catz Your Computer Pet	12.95
Cinemania 97	24.95
Dogz Your Computer Pet	12.95
Eve - Peter Gabriel	32.95
Gardening Encyclopaedia	35.95
Le Louvre	25.95
Monty Python's Complete Waste of Time	19.95
Monty Python & the Holy Grail	24.95
Musee D'Orsay	29.95
Music Central 97	24.95
Musical Instruments Microsoft	24.95
Mystery of Magritte	29.95
Redshift Astronomy 2	35.95
Star Trek Omnipaedia	22.95
Star Trek TNG Tech Manual	24.95
Ultimate Encyclopaedia of Soccer	23.95
Wine Guide 2.0 - Microsoft	24.95
You Don't Know Jack	26.95

Screen Savers

After Dark 4.0	15.95
Simpsons	12.95
Star Trek TNG	12.95
Totally Twisted (&3.5")	12.95

Mac Games

Prices INCLUDE VAT AND UK DELIVERY!

Duke Nukem 24.99
Quake 24.99

Duke Nukem & Quake prices include
Guaranteed Next Day Delivery
(UK only - deliveries Monday to Friday) **

Action & Arcade

3D Ultra Pinball	21.95
3D Ultra Pinball 2 Creep Night	19.95
Absolute Zero (PPC)	27.95
Abuse	36.95
Bedlam (PPC)	21.95
Carmageddon *	Call
Damage Incorporated.	28.95
Dark Forces	25.95
Descent (PPC)	14.95
Doom 2 (15)	21.95
Duke Nukem	**24.99**
Final Doom	21.95
Flashback (3.5")	14.95
Hexen	17.95
Hexen Death Kings of the Dark Citadel add-on	24.95
Marathon Triology	**38.95**
Marathon Infinity	27.95
Master Levels of Doom 2 add-on	26.95
MechWarrior 2 (PPC)	29.95
Prime Target (PPC)	23.95
Prince of Persia 1 & 2 Collection	10.95
Pro Pinball - The Web	17.95
Quake	**24.99**
Rebel Assault 2	21.95
Skull Cracker	27.95
Terminal Velocity (PPC).	21.95
Ultimate Doom	13.95
Wing Commander 4 (PPC)	19.95
Worms	21.95
X Wing Collectors edition	25.95
ZPC.	44.95

Adventures & RPG

9	32.95
Alone in the Dark	24.95
Amber Journeys Beyond	39.95
Broken Sword (15)	26.95
Congo	37.95
Crystal Skull	23.95
Derrat Socerum	27.95
Dungeon Master 2	19.95
Elk Moon Murder	25.95
Fallout: A Post Nuclear Adventure*	Call
Fragile Allegiance*	Call
Frankenstein Eyes of the Monster	18.95
Full Throttle	24.95
Gabriel Knight 2 Beast Within	19.95
Gabriel Knight Sins of the Fathers (3.5")	14.95
Hardline	27.95
Kings Quest 7	15.95
Last Express	29.95
Leisuresuit Larry VII	24.95
Lighthouse (PPC)	28.95
MYST	23.95
Obsidian (PPC)	47.95
Phantasmagoria (18)	24.95
Qin Tomb of the Middle Kingdom	39.95
Rama	34.95
Sacred Mirror of Kofun	27.95
Secrets of Luxor	36.95
Shivers	24.95
SPQR: The Empire's Darkest Hour.	Call
Spycraft The Great Game	31.95
Star Trek BORG.	Call
Star Trek Deep Space Nine	25.95
Star Trek Klingon	36.95
Star Trek Final Unity	19.95
The Dig	17.95
The Last Express	29.95
Titanic	42.95
Torins Passage	31.95
Under a Killing Moon	23.95
Wrath of the Gods	19.95
Zork Nemesis..(PPC)	32.95

Board & Card Games

Asterix Caesar's Challenge	24.95
Bridge 8.0 (3.5")	32.95
Chessmaster 4000	29.95
Erics Ultimate Solitaire	Call
Hoyles 5.0	24.95
King of Solitaire v2 (3.5")	21.95
Mah Jong Parlour	37.95
Monopoly	36.95
Scrabble	38.95

Flight Sims

A 10 Attack	29.95
A 10 Cuba Missions	29.95
Apache Longbow (PPC)	24.95
F/A 18 Hornet 2 Korean Missions	29.95
F/A 18 Hornet 2	**29.95**
F/A 18 Hornet 2 Bundle	**44.95**
F/A 18 Hornet 3 (PPC 80MHz min)	38.95
Flight Sim 4 (3.5")	34.95
HIND (PPC)	24.95
Out of the Sun (3.5")	12.95

Sport

Actua Soccer	21.95
Actua Golf *- Coming Soon!	Call
Al Unser Jr Arcade Racing (unboxed)	16.95
Alley 19 Bowling.	35.95
Indy Car II (PPC)	15.95
International Tennis Open (& 3.5")	24.95
Links Pro	27.95
5 Links Courses only £16.95! see Compilations	
Links Pro Course - Oakland Hills CC	18.95
Links Pro Course - Valhalla	17.95
Nascar Racing (PPC)	24.95
Virtual Pool (PPC)	**23.95**

Strategy & Sims

10 Intelligent Strategy Games	31.95
Caesar 2	Call
Capitalism	26.95
Castles Seige & Conquest (3.5")	15.95
Colonization	**17.95**
Command & Conquer (PPC)	Call
Creatures *	26.95
Heroes of Might & Magic 2	34.95
Incredible Machine 3	18.95
Outpost	26.95
Shanghai Great Moments	26.95
Sim Ant, Earth, Life, or Farm each	9.95
Sim City Classic	9.95
Sim City 2000 Collection	32.95
Sim City 2000	24.95
Sim Isle	29.95
Sim Tower (& 3.5")	17.95
Spaceward Ho 4	Call
W Zone (WarCraft 2 - 50 extra levels)	**19.95**
WarCraft BattleChest	**54.95**
WarCraft 2 Tides of Darkness	**27.95**
WarCraft 2 Expansion Disk	14.95
WarLords II (& 3.5")	29.95

Wargames

Allied General	21.95
Close Combat (PPC)	30.95
Harpoon 2	17.95
Over the Reich	34.95
Panzer General	24.95
V for Victory (4 excellent WWII wargames)	39.95

Compilations

5ft 10 Mac Pack	**29.95**
Includes Hell Cab, Mad Dog McCree, Dracula Unleashed, 2000 fonts, Dragons Lair, Stowaway, Prince Interactive	
Games of Fame vol 1	**21.95**
Crystal Calibum, FA18 Hornet Classic, Pathways into Darkness	
Games of Fame vol 3	**34.95**
WarCraft Orcs and Humans, Marathon & A10 Attack LE	
Links Pro - 5 Courses vol 1	**16.95**
Mauna Kea, Firestone, Innsbruck, Prairie Dunes, & Bighorn	
Links Pro - 5 Courses vol 2	**16.95**
Banff Springs, Troon North, Coghill, Devils Island & Belfry	
Links Pro - 5 Courses vol 3	**16.95**
Pinehurst, Riviera, Harbour Town, Torrey Pines & Barton Creek	
Marathon Trilogy	**38.95**
Includes 4 games! Marathon 1, Marathon 2: Durandel, Marathon Infinity & Pathways into Darkness- the game that prepared the way for Marathon.. Also has over 1200 maps,a look at the making of Marathon and many 3rd party add ons	
Lucas Arts Archives vol 1	**32.95**
Lucas Arts Archives vol 2	**48.95**
Rebel Assault, Rebel Assault II: The Hidden Empire, X-Wing Collectors Edition and Dark Forces Super Sampler (3 levels)	
Top Ten Mac Pack	**29.95**
War Craft BattleChest	**54.95**
Orcs and Humans, Tides of Darkness & Beyond the Dark Portal	

JOYSTICKS

Thrustmaster Controllers- UK Warranty

- **Flight Control System Joystick** **94.95**
- **Weapon Controls System** **64.95**
- **Rudder Controls System** **99.95**

Thrustmaster Full Set
(Flight, Weapon, & Rudder Controllers)
Includes FREE F/A 18 Hornet v2 CDROM
All this for just £254.95 inc VAT & delivery

- **Formula T2 Steering Wheel & Pedals** **119.95**
- **Top Gun Joystick** **Call**

Gravis Blackhawk	**49.95**
Gravis Firebird	**67.95**
Gravis Mousestick 2	**38.95**
Gravis Gamepad	**25.95**
Jetstick	**38.95**
MacAlly Joystick	**35.95**
MacAlly GamePad	**25.95**
Microsoft Sidewinder Pro Joystick	**59.95**

GENUINE APPLE INK CARTRIDGES

Prices INCLUDE VAT & DELIVERY

Stylewriter I, II,1200 or 1500 BLACK:-

1	2	3	4	5	10
16.95	32.95	48.95	64.95	79.95	154.95

Stylewriter 1500 COLOUR Cart £26.95

Stylewriter 2400 & 2500		**2200**
Black tank	9.95	13.95
Colour Tank	15.95	16.95
Black Cartridge	28.95	-
Colour Cartridge	30.95	-

HEWLETT PACKARD NOW AVAILABLE

HP BLACK & COLOUR CARTRIDGES & PAPER

ACCESSORIES

ACCESSORY PRICES INC DELIVERY

33.6 Voice Modem

Only £83.36 ex vat!

[£97.95 inc vat & delivery]

Fast 33.6kbps speed
Voice, fax, data software
5 year warranty - UK built

	ex vat	inc vat
8 speed CDROM Drive d2	136.13	159.95
12 speed CDROM Drive d2	161.66	189.95
16 speed CDROM Drive d2	189.74	222.95
Kensington 1 button Mouse	33.15	38.95
Kensington 2 button mouse	41.66	48.95
MacAlly Single Button Mouse	16.98	19.95
MacAlly Mac Trackball	33.15	38.95
Zy Fi 2 PRO Speakers (36w RMS)	46.77	54.95

PRICE	£29.99	**ON SALE**	Now	**CONTACT**	Dorling Kindersley on 0171 753 3488	**WEB SITE**	http://www.dk.com/
MAC	**Processor:** 68040 • **RAM:** 8Mb	**POWERMAC**	**Processor:** any • **RAM:** 8Mb	**REQUIRES**	**System:** 7.0 • **HD space:** 9Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** 2x speed CD-ROM drive	**AGE RANGE**	Eight years and up

Earth Quest

It began with a few rumbles, which soon became tremors. Then the Earth moved. Yes, the ground-breaking publisher Dorling Kindersley has released another CD-ROM...

Seventeen is the magic number in geology. The Earth's surface, you see, is made up of 17 tectonic plates, which, literally, form the ground upon which we stand.

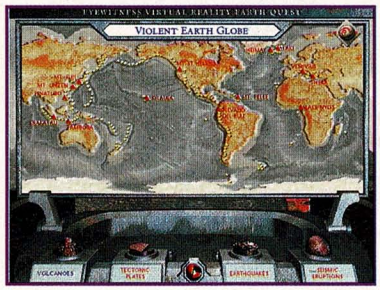
These 17 slabs of stone are also the basis of the "quest" element in Dorling Kindersley's Eyewitness Virtual Reality *Earth Quest*. At the centre of the VR Earth museum presented here is a contraption called the "Earth Builder". By answering sets of questions, you can win plates that are then placed on a glowing orb. If you collect all the plates, the orb becomes the Earth and your quest is complete.

Answering all the questions correctly, though, is a tough task. Luckily, Dorling Kindersley has decided to pack the CD full of information that will help you to deal with the Earth Builder, as well as learn heaps about geology.

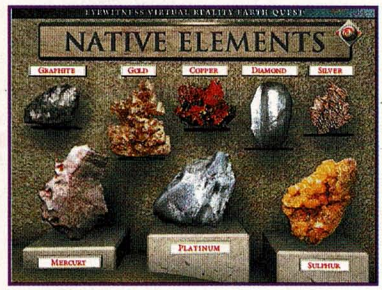
Igneous rock is as good a place as any to start. Coming from our planet's molten core, it's the bedrock of all things stony. *Earth Quest* deals out plenty of information about igneous rock. First there's a thorough text description of this genre of rock at the museum's "What is Rock?" exhibit. You will learn that there are 600 varieties of igneous rock, falling into two main categories: intrusive and extrusive. The intrusive variety forms from molten rock within the Earth, while extrusive igneous rock results when lava cools on the Earth's surface after being disgorged by a volcano. Granite is the most common type of igneous rock.

It's disappointing, however, that words like dykes, sills and basoliths, which are mentioned in the Igneous Rock article, aren't defined or linked to a glossary. As this CD is aimed at children aged eight and up, this is a major failing and one that occurs throughout. Plagioclase feldspar, pyroxene, amphibole and rhyolite might be the mineral additives in a breakfast cereal for all we know, yet they all appear without explanation at the screen describing Porphyritic Andesite (another sort of igneous rock).

Various sorts of landscape and their features are discussed at the "Shaping the Earth" console.



The various options on this map enable you to locate major volcanoes and tectonic plate fault lines.



The rocks in *Earth Quest* come from the Natural History museum. There's text and a factfile on each one.

An erupting volcano serves as the backdrop for your studies on "The Violent Earth".

However, this failing aside, the exhibits in the museum bombard you with facts. The text is concisely written and there are pictures of all the key varieties of rock from carbonates to phosphates, and silicates to sedimentary rock.

Three smaller rooms are attached to the museum's main cavern. One's called "The Violent Earth", and inside is a magnificent volcano. From a console overlooking it, you can simulate earthquakes and volcanic eruptions or read about these phenomena and how they change the Earth. There's also a map showing you the main sites for this sort of activity such as Japan's Mount Fuji or Mount St Helens in Washington State. You can also see the world broken up into its constituent tectonic plates. If you're worried about the Americanisation of British culture, you may take some comfort from the fact that North America's plate is moving away from the European plate by 2cm per year. Then again, it's closing in at the same rate from the other direction.

Another side room houses a "History of the Earth" feature. Here, you can watch narrated animations about how the Earth formed and how its core, mantle and crust came about. There is also a screen that explains the geological time scale and differentiates between eras, periods and epochs. (Eras contain periods, which, in turn, contain epochs.)

Finally, you can look into a room on mining. Normally, this would be considered a topic for a geographic CD rather than a geological one; but if you wish to find out how the extraction of minerals from the Earth has helped us learn more about it, you can do so here.

So, if you take the time to complete *Earth Quest*, you'll certainly come away knowing a great deal more about the fundamentals of geology. There are only two key disappointments. First, the CD needs to define far more terms than it does, and second, it doesn't seem to contain quite as much information as DK's previously released Virtual Reality *Dinosaur Hunter*. There's less to explore and you can't move around as much.

Nevertheless, the task of enticing people into learning about rocks is much harder than with dinosaurs. Yet the CD is just as interesting, fact packed and easy to use as any other DK offering. It's ideal for GCSE students, though too tough for younger children. **GARRICK WEBSTER**

Little extras

On top of all the information in *Earth Quest*, you can link to the latest geological findings via the Internet. In addition, included in the box is a DK pocketbook called *Rocks and Minerals*, just in case you feel like going out and identifying some rocks.

Earth Quest

Too many complex terms are undefined, but this CD-ROM is packed with well-illustrated and concise information.

MF rating 81%

PRICE £19.99	**ON SALE** Now	**CONTACT** Acacia Interactive on 01730 268463				**WEB SITE** http://www.acacia.co.uk/	
MAC **Processor:** 68030 • **RAM:** 8Mb		**POWERMAC** **Processor:** any • **RAM:** 8Mb		**REQUIRES** **System:** 7.1 • **HD space:** 6Mb • **Screen:** 640 x 480 • **Colours:** 256 •			
Extras: 2x speed CD-ROM drive		**AGE RANGE** 14 to 16 years, or any GCSE student					

Geography

Just as winds wear away mountain peaks, the GCSE exams arrive each year to erode the sanity of our teenage population. But don't despair, because help is at hand...

Are you aware of the relationship between freeze-thaw erosion and moraines? Do you know which British region's ethnic minority population has the highest proportion of East Indians and Pakistanis? Are you familiar with the concept of longshore drift?

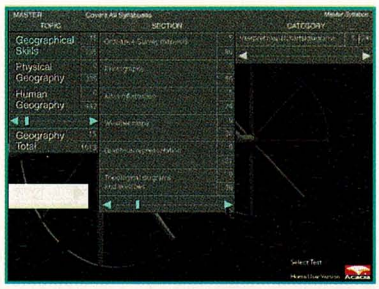
These questions may seem irrelevant, but if you're taking your GCSE Geography exams, knowing the answers could be the crucial factor deciding whether you pass or fail. And they're exactly the sort of questions fired at you in Acacia's *Geography* CD (from the *Revise* series).

Unlike Dorling Kindersley's Eyewitness Virtual Reality *Earth Quest* (which covers Geology), *Geography* does not attempt to entice pupils with fancy graphics, animations and quest-like games. This CD is about as straightforward as they come. Its sole purpose is to test if you're prepared for a GCSE Geography exam.

Geography contains over 1,000 questions, all written and edited by teachers. These are divided into Geographical Skills (map reading and photographic analysis), Physical Geography (tectonics, rivers and glaciers, for example) and Human Geography (agriculture, industry, settlement and so on). The interface enables you to devise a test by choosing questions from more specific topics under the main headings, or randomly from the entire pool.

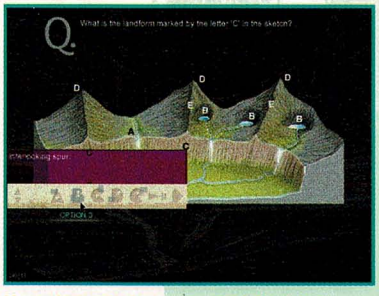
For instance, you might need a quiz on the Physical Geography section of the syllabus. No problem. You can construct one using two questions on rivers, two on glaciers, two on coastal processes, two on weather and climate, and a further pair on the Earth's crust. Alternatively, the exams could be nearing and you may want to design a larger test randomly drawn from the whole lot. In this case you might set the program to pick 20 questions from each of the main sections.

When you get down to it, you'll find all the questions follow the same format – they're all multiple choice with five possible answers. Once you've picked your answer to any particular question, you're instantly informed of whether or not you got it right. If you get it wrong you have to keep guessing until you click the correct letter, and at this point an explanation appears on the screen. Most of the time, this not only justifies the right answer, but tells you why some of the other choices were incorrect. An extremely useful feature.

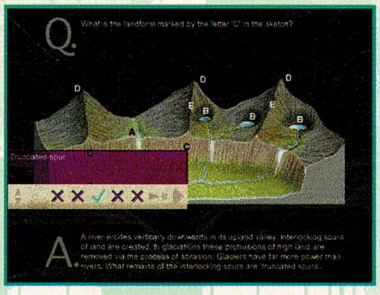


You can set up your own test in *Geography* – either a random selection, or your choice of questions from specific areas of study.

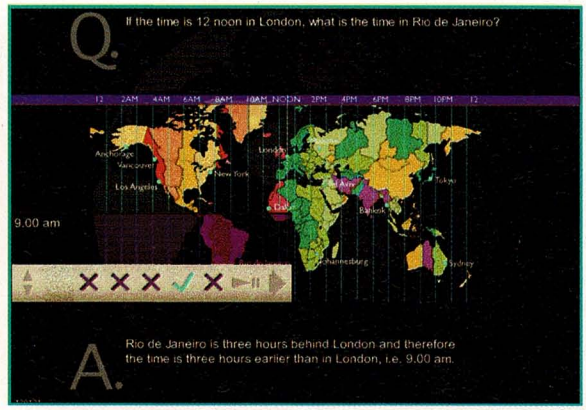
Generally, though, the CD is sterile and two-dimensional. Okay, there are themed backgrounds like rendered mountains for the tectonic questions and curvy lines for those relating to topographic maps. And yes, some questions have photos with them, as well as maps and charts. You may even uncover the odd video clip or animation. But overall, you'll find that *Geography* is designed to be useful rather than attractive.



If you haven't done your revision, then you'll probably just have to guess the answer to this question on glaciers...

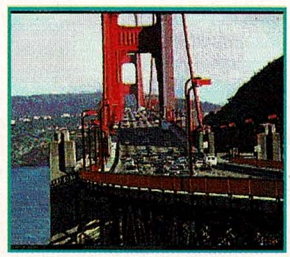


... Fortunately, *Geography* explains each answer, and also indicates why the other choices are incorrect.


Q.
If the time is 12 noon in London, what is the time in Rio de Janeiro?
9.00 am
A.
Rio de Janeiro is three hours behind London and therefore the time is three hours earlier than in London, i.e. 9.00 am.

The answer bar is covering Rio in this shot, but it can be moved anywhere on the screen, enabling you to see the entire map.

The hope is, presumably, that the audience it's aimed at is mature enough not to require any attention-span enhancing multimedia frippery. As a revision aid, *Geography* is highly effective: you can make your tests and quizzes as long or as short as you like, and the inclusion of an analysis screen enables you to see how well you're doing, which is very handy. For instance, if you set a mock exam of 100 questions and you're struggling with, say, Ordnance Survey map reading skills, you can tell instantly from the chart. You can then concentrate on studying this topic, and then quiz yourself on that area specifically, perhaps spicing up the drill with one or two questions randomly drawn from other areas of the syllabus.



A lucky multimedia moment. The question relating to a suspension bridge features a video clip showing cars driving across just such a bridge. Phew!

Geography is not the CD to get if you or your children want to learn about moraines, the proportion of ethnic minorities in the English regions or what longshore drift means. The learning should have been done already. But if you're preparing for exams, it's definitely a worthwhile buy. It will test you, and help you identify the parts of the syllabus you should focus your revision on. Best of all, perhaps, is the fact that it comes with a money back guarantee, which is a measure of the confidence of Acacia, the CD's producers. If you've registered the *Geography* CD and you fail your exam, you get your money back. Simple. Unlike geography.

GARRICK WEBSTER

Across the boards

Like all the other CDs in the Acacia *Revise* series, *Geography* covers the six main English GCSE examination boards, as well as the Scottish Standard Grade and Irish Junior Certificate.

Geography

It may be dull, grey and rather soulless, but it does its job thoroughly – and the money back guarantee is something of a bonus.

MF rating 74%

PRICE	£39.99	**ON SALE**	Now	**CONTACT**	Disney Interactive on 0181 222 1571	**WEB SITE**	http://www.disney.com/
MAC	**Processor:** 68040 • **RAM:** 8Mb	**POWERMAC**	**Processor:** any • **RAM:** 16Mb	**REQUIRES**	**System:** 7.1 • **HD space:** 20Mb • **Screen:** 640 x 480 • **Colours:** 256 •		
Extras: 2x speed CD-ROM drive		**AGE RANGE**	Three to seven years				

101 Dalmatians

Animated Storybook

Are these dogs too cute for their own good? We take this latest Disney offering out for a walk and put it through its paces.

In the world of *101 Dalmatians*, a mate is not someone to lend you a fiver until the weekend, but something altogether more romantic and Disneyesque.

Always a company to make the most of a good thing, it might look as if Disney is in danger of churning out animated storybooks on all its major movie releases. So far, we've had *The Lion King*, *Pocahontas* and *Notre Dame* all being fed into some automated assembly line of a conversion process.

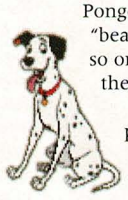
But, unlike many publishers in the genre, Disney Interactive seems to be committed to the process of evolution, rather than sticking to the same tried-and-tested formula. Each new release has more built-in games, which also improve in quality, and there are more panoramic scenes to give relief from the staid, page-like presentation. *101 Dalmatians* continues the worthy tradition.

A dog's life

Let's get the puns over with. Few Disney films have a better pedigree than *101 Dalmatians*. This classic tale of good and evil, which contrasts the innocence of puppy love with the monstrous act of turning a litter of spotty adolescents into a fashion-clothing collection, has more than stood the test of time. There, that's better...

Four-legged friend

Things start off normally enough. Bachelor boy Roger is tucked up in bed with a teddy bear and the remains of last night's pizza (there are probably a few empty cans of Carlsberg under the bed, too, but this is a children's CD so they're kept out of sight). The story begins with the fateful words, "Roger needed a mate". If you're only three years old and you don't know what a mate is, you can just click on the word and one of the 99 puppies pops up and explains all. You'll soon discover that a mate isn't someone to help you in laddish pursuits at the football ground or local pub, but something entirely different. More to the point, "tricky" words are explained through the use of poetry, both written and narrated in a separate pop-up book, which is fun and, thankfully, nothing at all like a dry dictionary.



Other words appear in boxes on the screen, such as the word "pretty". Every time you click on these, a different synonym appears. In this case, Roger's dog Pongo almost drools as he pronounces "beautiful", "gorgeous", "lovely" and so on. All this, and you're still only on the first screen!

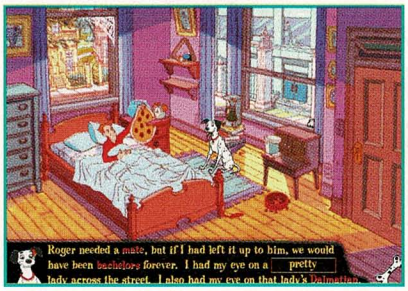
You can leave to go to the next page by clicking on the door, appropriately enough, or via the window (don't try this one at home, kids). Now you're presented with the first of four games, or as Disney likes to call them "interactive learning activities". The simple game of matching pairs gets a novel twist as you have to match owners to their dogs, who look strangely alike. Things get more complex, involving reading names on dog bowls and so on, as you progress through three different skill levels.

Moving on, Cruella is every bit as cruel as you remember, while Anita and her dog Perdy are every bit as lovely. Love is in the air but things are not off to the smoothest of starts. You can enjoy the park life with a panoramic scene that scrolls around as you follow your mouse off either side of the screen. And there are more games to play, too. Dotted around the book, and linking in exceedingly well with the story plot, there's a code-breaking game for sneaking into Cruella's mansion. The code is based on animal sounds and you have to equate these to letters of the alphabet and enter them on a security pad.

Once you're inside, there's another game that involves solving puzzles and clues to find the dognapped puppies, and, to round things off, there's a *Pacman*-type game where you have to collect things that begin with certain letters without getting caught by the De Vil woman. Oh, and there are six sing-along songs as well, to exercise your larynx as well as your brain.

All in all, as animated storybooks go, this one is something of a classic, combining learning and fun – shame about the price.

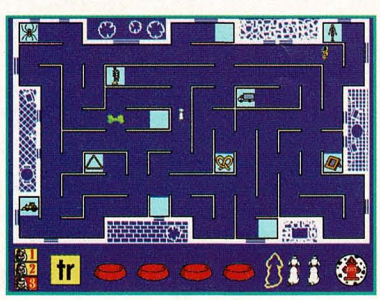
MATTHEW RICHARDS


Roger needed a mate, but if I had left it up to him, we would have been bachelors forever. I had my eye on a pretty lady across the street. I also had my eye on that lady's Dalmatian

Left: Whatever bachelors dream of finding in their beds first thing in the morning, the reality is always disappointingly different. Make mine a screen goddess with extra pepperoni.

Right: Owners often look like their dogs, which is a great help in this game of pairs. More difficult skill levels bring reading and listening skills into play as well.

In Cruella de Vil's mansion, your task is to find the puppies, and you do this by solving clues – or, at the simplest level, by finding "something that looks like this".



Remember *Pacman*? Well this isn't entirely different, except you have to find things that start with certain letters and avoid getting caught by "she who must be obeyed" in the meantime.

101 Dalmatians

Suitably puppy-like, this CD is full of vitality and excitement. Our rating would have been higher but for the steep price tag.

MF rating 76%

Listen carefully to sequences of animal sounds and work out the corresponding letters in order to crack the code.

PRICE	£47	ON SALE	Now	CONTACT	Sherston Software on 01666 840433	WEB SITE	http://www.sherston.com/
MAC	Processor: 68030 • RAM: 2Mb	POWERMAC	Processor: any • RAM: 4Mb	REQUIRES	System: 7.1 • Screen: 640 x 480 • Colours: 256 •		
Extras: 2x speed CD-ROM drive		AGE RANGE	Three to six years				

Nursery Rhyme Time

Is your child phonologically aware? If so, a head start in reading is on the cards, apparently. Find out more with this new CD...

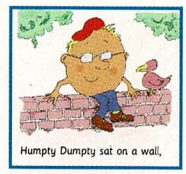
Let me play.

Coming firmly from the educational corner of the ring, Sherston Software is a specialist in serious software for children. The company says that if young children lay down good phonic building blocks, they're onto a winner when it comes to developing reading skills. Moreover, it suggests that nursery rhymes are the ideal vehicle for going down this particular road.

When you run your mouse cursor over the 11 different nursery rhymes, the first line is given at the bottom of the screen.

With this in mind, *Nursery Rhyme Time* delivers 11 time-honoured examples of the genre on a triple format CD-ROM. Again, the delivery format highlights the educational background of the company, because schools won't have to worry about whether their early learning classrooms are kitted out with Acorns, Macs or PCs – the CD will just plug in and go. And to ram home the school connection, there's a heap of photocopyable paper-based activities from flash cards to raw materials for making your own books too.

The CD itself provides options for watching the nursery rhymes unfold through pleasantly illustrated and competently narrated screens. For more interaction, you can choose to sing along with the rhymes or even play them. Sadly, though, the **Let Me Play** option is euphemistically titled, to say the least. The normal collection of hotspots to unleash humorous animated sequences is replaced by simplistic single sequence animations that fail to satisfy. As is so often the case with educational software that tries to break into the consumer market, the underlying principles might be very sound, but the execution is lacklustre and dull compared with most edutainment titles. Your children may well be disappointed, and, considering the high price, so will you. **MATTHEW RICHARDS**



The extent of the **Let Me Play** options only enables you to watch, sing along, go to the next page, or quit. A bit poor, really.

Nursery Rhyme Time

Well illustrated and narrated, but not enough to keep the interest of most kids.

MF rating 49%

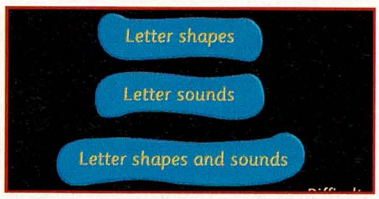
PRICE	£35	ON SALE	Now	CONTACT	Sherston Software on 01666 840433	WEB SITE	http://www.sherston.com/
MAC	Processor: 68030 • RAM: 2Mb	POWERMAC	Processor: any • RAM: 4Mb	REQUIRES	System: 7.1 • Screen: 640 x 480 • Colours: 256 •		
Extras: 2x speed CD-ROM drive		AGE RANGE	Three to six years				

abc CD-ROM

Forget *Mighty Morphin' Power Rangers* – it's time for the magnificent morphing alphabet, and learning your ABC again...

The teacher/parent screen enables you to set difficulty levels for the activities, as well as the number of tries allowed and other options.

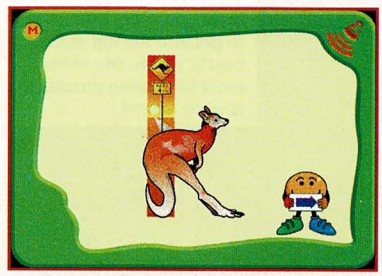
The *Talking Animated Alphabet* has worked well for Sherston Software in the past, making the software something of a favourite in British classrooms. Originally designed by ex-primary school teachers Bill and Lou Bonham, the newly-updated version goes under the name of the *abc CD-ROM*. It's introduced by a charming little animated character called Alphabod, and revolves around three separate activities for learning the letters and sounds of the alphabet.



Three different activities are on offer, each with various skill levels and options to suit all ranges of ability.

The activities concentrate on the areas of discriminating between different letter shapes, linking letters with sounds and, well, that's about it. What really does stand out, however, is the quality of the illustration: the letter shapes are imaginatively woven into clever designs of words that begin with that letter, like "h" for house. Even better is how the letters morph into their respective objects.

Also, like *Nursery Rhyme Time*, there are some excellent teacher resources in the box to go along with the CD too. Here, you have a superb set of glossy, full-colour flash cards with letters on one side of the folding cards and the illustrated objects on the other. It has to be said, though, that even this does little to justify the price of the product, which is still a bit steep. **MATTHEW RICHARDS**



Artist Pete Kolodziejczyk may not have an easy name to pronounce, but his illustrations are uniformly excellent. The way that characters morph into their respective objects is also very appealing.

abc CD-ROM

A fun way of learning the alphabet, with excellent illustration and clever morphing.

MF rating 59%

PRICE	£44.99	**ON SALE**	Now	**CONTACT**	Virgin Interactive Entertainment on 0171 368 2255	**WEB SITE**	http://www.vie.co.uk/
MAC	PowerMac only	**POWERMAC**	**Processor:** any • **RAM:** 16Mb	**REQUIRES**	**System:** 7.0 • **HD space:** 18Mb • **Screen:** 640 x 480 • **Colours:** 256 •		
Extras: 2x speed CD-ROM drive							

Broken Sword Shadow of the Templars

Bored? Got nothing to do? Then try getting yourself caught up in an all-encompassing adventure, where your aim is to take over the world. Dave Golder tries it and survives to tell the tale...

MACFORMAT Classic

ON THE CD

Exclusive playable demo – intro plus first section of the game

For years now, grizzled old game-players have checked out every point-and-click adventure that's come along and concluded, with much tutting and wistful sighs, that they're just not as good as *Monkey Island*. With any other genre of computer game, you might accuse them of rose-tinted nostalgia – but when it comes to point-and-clickers, such comments do have a certain amount of justification.

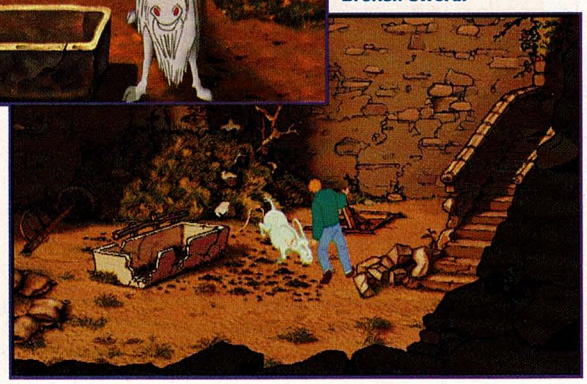
Advances in game technology, you see, tend to pass point-and-clickers by. Sure, the aesthetics may evolve, but the core elements which made point-and-clickers enjoyable back in the mid '80s have remained constant: a strong plot, interesting characters and challenging, but satisfying, puzzles. LucasArts' *Secret of Monkey Island* games combined all these elements so superbly, but nothing since then has got the balance so absolutely right. Until now.

George Stobbart is the innocent American tourist pulled into a plot by powermongers to take over the world.

Finally we have a true challenger to the throne, and it's not even from LucasArts. Revolution's *Broken Sword* gets the balance just right, exuding quality and good old-fashioned entertainment. The combination of humour, suspense and puzzles that are a sheer joy to work out is spot on. You might be frustrated for a while trying to get past a certain stage, but when you finally manage it, you can't help but admire the ingenuity.

It all starts innocently enough, with American tourist George Stobbart (the character you control) having a coffee outside a café in Paris. Next thing, a clown enters the café, then makes an even quicker exit carrying a briefcase, seconds before the café explodes, killing the original owner of the briefcase. This draws the foolishly inquisitive Stobbart into an ever-thickening plot which twists and winds like the large intestine of a Tyrannosaurus Rex. It takes him from Paris to sumptuous locations in Ireland, Spain, Syria and Russia as he becomes involved in an attempt by the descendants of the legendary Knights Templar to take over the world.

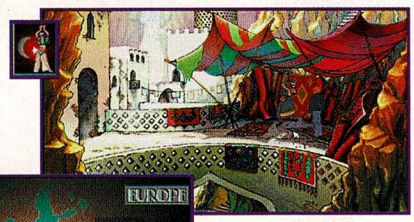
The belligerent goat, which butts you every time you try to get into the dig at the castle, poses one of the most infuriating puzzles in *Broken Sword*.



Even if this was merely the plot of a pulp thriller novel, it would be pretty engrossing stuff. But add in the interactive elements of an adventure game, and handle them as impressively as *Broken Sword* does, and the result is awesomely entertaining.

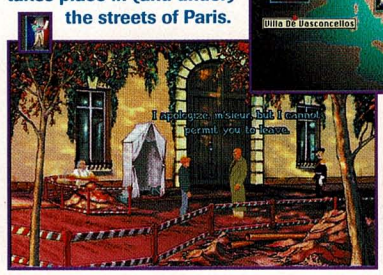
For one thing, the game gets into its swing with creditable speed. Too many recent adventures (stand up, *Rama* and *The Dig)* require you to spend the first hour of play getting to know the characters, the places, the basic plot – just reading loads of info and listening to the cast natter on for ages – before you get to any decent puzzling. Not so with *Broken Sword*, where you're off and running immediately. And all the information you need comes to you gradually, and mainly in bite-sized chunks.

Above: You'll discover the crystal when your travels take you to Ireland.

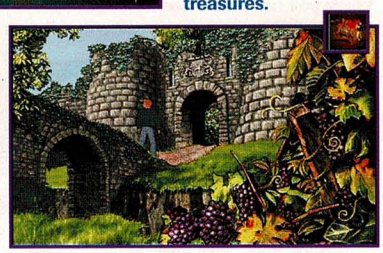


Above: A toilet brush becomes essential in Syria (and not because you've eaten a kebab).

Below: A trip to Spain reveals another one of the Templars' ancient treasures.



Below: Much of the game takes place in (and under) the streets of Paris.



Also to the game's credit is the way the puzzles grow steadily more complex – there's a definite learning curve here. If you're an experienced adventurer, you might wonder what all the fuss is about as you romp through the first hour or so of play, but no matter how well versed you are in the art of point-and-clicking,

Attention!

Revolution has had some complaints that the game crashes at a couple of points on certain Macs. The company is in the process of producing a complete bug fix for this, which we hope to include on the Cover CD as soon as it's available. Should you run into problems, a good tip is to turn the volume settings right down. Another tip that the manual doesn't tell you is that if you hold down [command] you can use your mouse button to examine objects – an essential task for solving some puzzles in the game.

Unfortunately, some of the conversations go on a touch too long, but at least the dialogue is generally fairly amusing.

The problem you face here is how to get the juggler away from the manhole cover so that you can get into the sewers.

you'll get to a point where you do have to exercise the old grey matter. And as complicated as some of the later puzzles are, even if you're a novice adventurer you'll be able to cope. *Broken Sword* introduces you to the intricacies of working out puzzles very gently, and so you're soon well equipped to tackle the more advanced stuff.

And in fact some of the puzzling does get very convoluted indeed. This is no mere click-on-everything game (despite the manual's initially worrying implication that it is). Timing, doing things in order, lateral thinking and close observation are all required. But the logic of the puzzles (thankfully rarely immediately obvious once you get a good way in) is always ruthlessly coherent; it's hard occasionally, sure, but never debilitatingly so.

But the reward for working out the puzzles doesn't merely derive from a smug feeling of superiority. The sheer kinetic power of the plot forces you to want to keep on trying, while often it's the sheer brilliance of the characterisation that makes completing a puzzle worthwhile. Just wait until you finally work out how to get the better of the belligerent goat or the jobsworth camp concierge for a great feeling of self-satisfied triumph.

Even when the puzzling does become a bit linear, the humour pulls it through. "I'm innocent, I'm an American," pleads Stobbart early on. "Make up your mind," retorts a Gendarme. This level of self-effacing wit permeates the dialogue, making some of the more potentially stodgy exposition so much more palatable. But you'll also be chuckling at some of the characters, situations, and even solutions to puzzles. You'll probably also be laughing at some of the accents, but for other reasons: the Oirish voices – all "top a te mornin to ye" and "ah, begorra" – are so over-the-top they're almost embarrassing.

Then, to top it all off, the thing sounds and looks extremely impressive. The settings are lush, the attention to detail is flawless, the animation and character design are excellent and the music – provided by *Inspector Morse* composer Barrington Pheloung – provides a gorgeous aural backdrop. Interspersed among the gameplay screens are a few animated sequences which may look reminiscent of *Dragon's Lair* in style, but don't let that put you off; they're designed and edited with the kind of skill you would expect from a Disney movie and never detract from the game. Only the accents and occasionally over-enthusiastic sound effects jar, but these really are minor quibbles when the script, character design, animation and voice artistry come together to create characters so instantly alive and vital as the mysterious Inspector Rosso and the mad old English Lady Piermount.

Completing this intriguing chess puzzle reveals another of the Templars' treasures.

As far as the control system goes, it's simplicity itself. Objects you pick up are stored in a bar that appears at the top of the screen when you move the cursor up into that area; click on what you want to use and drag it to where you want to use it. When you talk to someone, possible subjects appear at the bottom of the screen, and hot-spots are indicated when you move the cursor over them. It's surprising that objects can't be used in combination, but the puzzles are meaty enough without having to add this complication. The only cause for concern is that when you're in a conversation or an animated sequence, you can't access the game controls (save, quit, sound levels, and so on) and given that some of these can last a while, just pray the doorbell doesn't go.

The only niggle with *Broken Sword* is that you need an extended keyboard to access the game controls, because you have to hit the **F5** key. It's not a major problem, but it's an irritation that could have been easily rectified.

Broken Sword is a quality adventure game that doesn't need gimmicks to prove its point (no shoot-'em-up inserts or scratchy QuickTime movies here). This is pure point-and-click of the highest order. And only a narrow-minded grizzly old gamer would argue otherwise. **MF**

Above: There are some gorgeous graphical touches in the game, such as a rainbow which flickers in the arcing hose water.

Right: The manuscript contains a number of clues which propel George on his dangerous journey.

Broken Sword

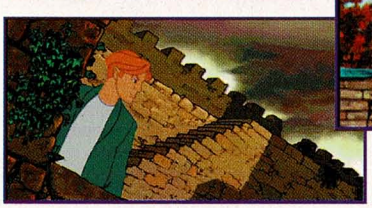
Finally, a point-and-click adventure which has usurped *Monkey Island* as the yardstick by which all point-and-clickers must be measured. Gorgeous and absorbing.

Graphics	**93%**
Sound	**95%**
Gameplay	**90%**

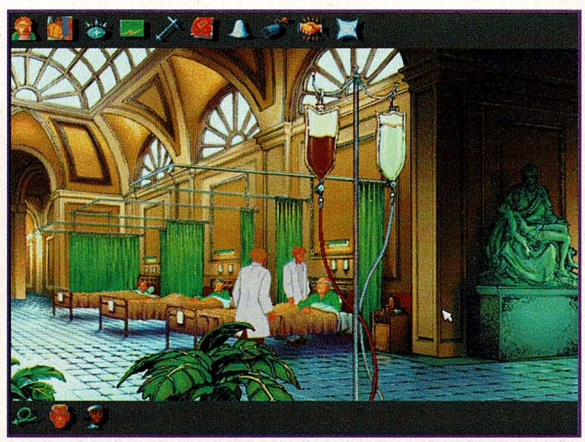
MF rating 92%

Stay indoors!

Friday 13 October 1307 was the day French King Phillip IV mounted a slur campaign against the Templars, and imprisoned several thousand on false charges so that he could get at their money. The plan didn't work, but the day was grim enough to give rise to the superstition about Friday 13th.



The game action is interspersed with some animated sequences which are reminiscent of the Don Bluth school of animation.



The control system is simple. Your inventory is shown at the top of the screen, while conversation topics are displayed at the bottom.

PRICE	£69.30	**ON SALE**	Now	**CONTACT**	Softline on 0181 401 1234	**WEB SITE**	http://www.graphsim.com/
MAC	PowerMac only	**POWERMAC**	**Processor:** any • **RAM:** 8Mb free (16Mb recommended)	**REQUIRES**	**System:** 7.1.2 • **HD space:** 35Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** 2x speed CD-ROM drive		

F/A-18 Hornet 3.0

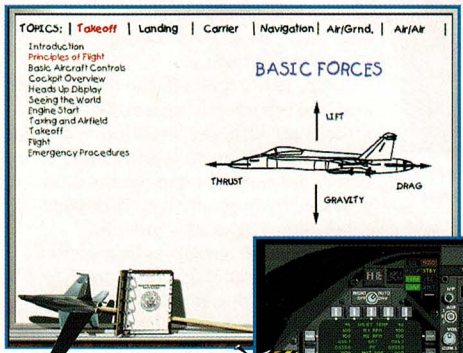
Always wanted to fly? Jim Chandler settles into the cockpit and eases back the throttle. Will it be a smooth flight or filled with turbulence?

You'd be forgiven for thinking that the *F/A-18 Hornet* series comes from the makers of the *Rocky* films. It's just over a year since we reviewed *Hornet v2*, and here we are already at version three, with no signs of stopping yet.

In case you don't know (where *have* you been?), *Hornet*, in its various incarnations, is a simulation of the US Navy's front-line fighter-cum-ground-attack aircraft, the F/A-18. It's a damn good one, too. For a start, your virtual plane handles beautifully, as you'd expect from a high-performance jet fighter. Its movement is slick and fluid, and you'll need a steady hand and quick reactions, particularly when you're attempting to land on a carrier.

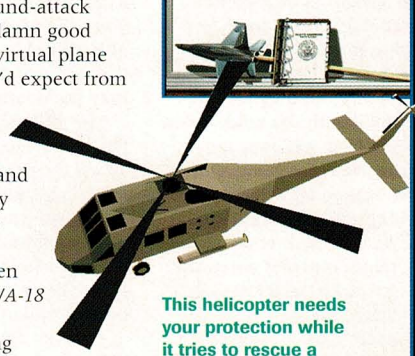
Flight simulators are often judged by their graphics; *F/A-18 Hornet 3's* are crisp and detailed, but there's nothing new. The terrain is nicely contoured, with reasonable attempts at towns and cities, although it's nowhere near as detailed as the shaded terrain and realistic buildings of *Apache Longbow*. The aircraft themselves, though, are very impressive. Your Hornet, for example, has a two-tone colour scheme, squadron markings and underwing stores. What's more, as you move your controls, you can see the elevators, ailerons, and even the flaps move.

The graphics have been ever so slightly improved since *F/A-18 Hornet 2*. Compared to the kind of graphic quality available in *Flight Unlimited* (MACFORMAT 39, 76%), *Hornet* looks a tad old-fashioned. Even so, there are plenty of ways to enjoy the scenery. As well as the standard over-the-dashboard forward view, there are views all around, plus views from the tower, from your wingmen, from any weapon you fire, and from any number of positions around your aircraft. There's also a nifty Padlock View which follows your current radar target, so you always know where it is in relation to your plane.



Left: The multimedia tutorials cover every aspect of flying your Hornet, starting with the basics.

Below: Look down into your cockpit and there are even more instruments. If your head-up display fails, some of these will be really useful.



This helicopter needs your protection while it tries to rescue a downed airman.

The shape of sims to come

MicroProse's forthcoming *Falcon 4* flight sim will be ported to the Mac. It will feature high-quality, texture-mapped terrain. Watch this space for our review...

It's not over yet...

This sim doesn't end with performance and graphics, though. Modern fighters have complex radar and avionics systems, and *F/A-18 Hornet 3* attempts to simulate them faithfully. The radar has different modes for air-to-air and air-to-ground scanning, different range and scan azimuth settings, and loads of targeting options to boot. There's an autopilot too, with a similar range of modes and options.

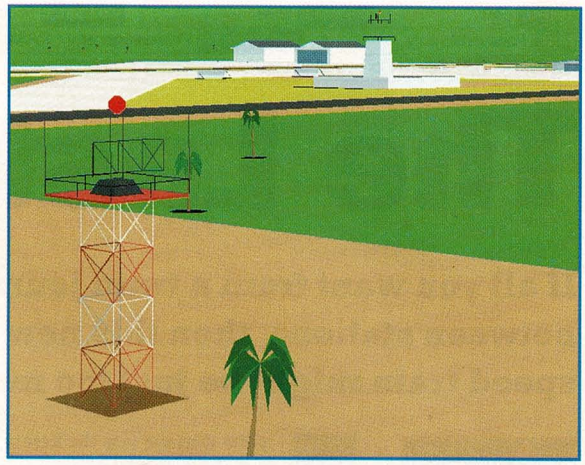
You need a detailed and straightforward manual to make sense of a complex simulation like this, but unfortunately *F/A-18 Hornet 3's* leaves a lot to be desired. It's designed to look like a real avionics manual and succeeds with its naff type, bad line drawings and far too many pointless acronyms. There are no screenshots, and there isn't enough useful information about the aircraft, such as stalling and cruising speeds.

All is not lost, though. *F/A-18 Hornet 3* comes with a very creditable multimedia

The Hornet has a highly sophisticated electronic cockpit.

Your Hornet is beautifully rendered and has moving control surfaces, which add to the game's appeal.

Landing on a carrier can turn out to be more difficult than shooting down enemy planes!



Your training missions start from an airbase on Hawaii.

"ground school", with instruction, animated diagrams and even QuickTime movies of game graphics. It can take you from the very basics of flying to the principles of air combat. It's somewhat abbreviated, and has the occasional glitch in the narrative, but it's still useful.

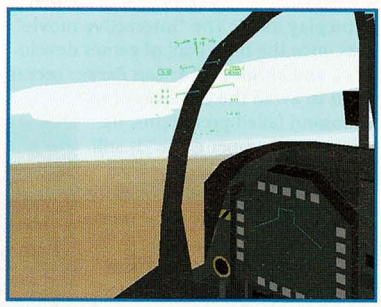
Once you've had your fill of ground school, you can take to the air in sunny Hawaii, for a series of training missions. These range from simply taking off and landing (on land and on carriers), to practising using your weapons. The Hawaiian scenery is quite impressive; in particular, the ships at anchor in Pearl Harbour make very tempting targets...

Take to the skies

Once you become a fully-fledged naval aviator, you can go on for a tour of duty in Kuwait. Your missions range from a simple bombing strike on an oil refinery, to downing enemy nuclear bombers, to daring strikes deep in enemy territory. If you've played *F/A-18 Hornet 2*, you may find these missions somewhat familiar, as many, if not all, seem to be taken from version two. The missions are varied and interesting (if you haven't played v2!), becoming progressively harder as you move on. In some missions you have to fly from and then to an aircraft carrier, so after a nerve-racking mission, you still have a tricky carrier landing to perform.

The third set of missions is set in Arizona, and is designed for network players. Up to four Macs can be linked over an AppleTalk network to play together or head to head. However, you can't link Macs and PCs, despite there now being a PC version of *F/A-18 Hornet 3*. There doesn't seem to be a serial option either, so you can't link two Macs using a serial lead.

F/A-18 Hornet 3 isn't that much of an improvement over the previous version, but then v2 was extremely impressive. The graphics are a little tidier and the multimedia tutorials are useful, even entertaining. Apart from these minor points, though, it's hard to see where the improvements lie. Certainly, the manual is worse than the previous version, and the reuse of the Kuwaiti missions from *F/A-18 Hornet 2* is very disappointing. We would have liked to see some new missions, preferably set in a different part of the world. (Perhaps the increment from version two to three may have more to do with there now being a PC version of the game than with any major change to the Mac version...) It's these disappointments and meagre improvements that prevent *F/A-18 Hornet 3* from gaining a MACFORMAT Classic award.



The Padlock View enables you to keep your target in sight at all times, though it's often hard to tell where you're going.

All's not lost...

Having said that, this is a very good simulation. It handles a complex aircraft in a sensible and entertaining way, and concentrates more on good flying and fighting technique than on gung-ho heroics. Its complexity means that it's a game for real jet-heads, but it's a rewarding and satisfying game to master. If you've already got *F/A-18 Hornet 2*, then you won't gain much from buying this new version. But if you're looking for your first combat flight sim for the Mac, then *F/A-18 Hornet 3* is the one to get. **MF**

F/A-18 Hornet 3.0

Slickly produced flight sim with challenging missions and deft controls. Not a great deal added since version two, though.

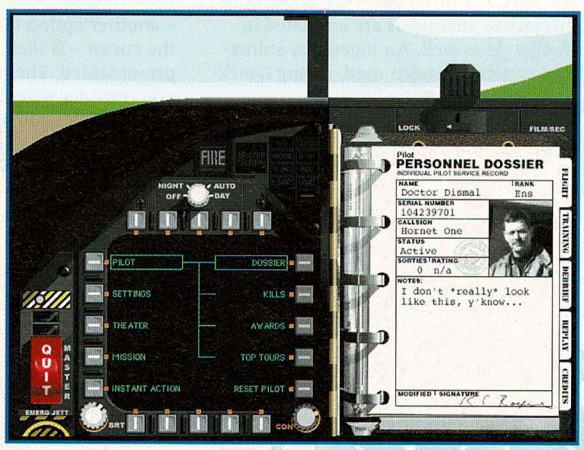
Graphics	**86%**
Sound	**64%**
Gameplay	**88%**

MF rating 88%

Hornet nests

The original *F/A-18 Hornet* was reviewed in MACFORMAT 10 and scored 85%. *F/A-18 Hornet 2* scored 93% when it was reviewed in MACFORMAT 36.

For some missions you have to take off from and then land on an aircraft carrier, which can be tricky.



You can keep a record of your kills and missions. If you do well enough, your pilot will be promoted.

PRICE £40	**ON SALE** Now	**CONTACT** Brøderbund on 01429 855000	**WEB SITE** http://www.lastexpress.com/
MAC PowerMac only	**POWERMAC** **Processor:** any • **RAM:** 16Mb (9Mb free)	**REQUIRES** **System:** 7.1.2 • **HD space:** 35Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** 2x speed CD-ROM drive	

The Last Express

If all you want from a train journey is a soggy sandwich and a quiet snooze between stations, then this new murder-mystery adventure aboard a high-speed train might be just too much for you. Tickets please...

Rummage through all the luggage you can find. You can't expect to be successful without being nosey.

Agatha Christie was the first to spot the potential of the train for murder mysteries. Take one closed environment (no one gets on or off), one corpse (preferably murdered violently) and a selection pack of eccentrics, nobs and upper-class fruitcakes – and you've got the ideal recipe for a whodunnit. Of course, Agatha had spotted the importance of the type of train she used. It's doubtful that *"Death on the Euston-to-Liverpool Sleeper"* would have had as much of an impact as *Murder on the Orient Express*.

Which is, of course, what *The Last Express* so desperately wants to be. For one copyright reason or another, the train is only referred to as the Paris-to-Constantinople express, departing from the Gare d l'Est in July 1914. Perhaps it was a little-known rival to the famous train. Perhaps. Anyway, as the dateline will tell you, Europe is preparing to tear itself apart. You play young American Robert Cath, and when you find your best friend Tyler murdered in his compartment, you're thrown headfirst into a world of murder, political intrigue and romance. Oh, and you have to work out whodunnit, of course.

Which is a good enough way to start any game, especially one as visually sumptuous as *The Last Express*. The artists involved with the game have clearly taken their brief to heart, and produced perhaps the world's only art nouveau computer game. Not only are the game's backgrounds drawn in the same pen and ink style as Lautrec and the gang, but the interactive characters are animated in their style as well. An ingenious animation system has been used, taking Quick-Time footage of real human faces, recolouring it and blending it on to traditional animations, giving the game an enviable period feel and atmosphere.

Left: This is you, and what a fine figure of young American manhood you are.

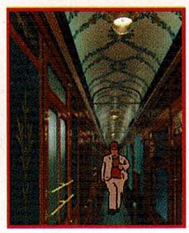
Right: The graphics are beautifully high-resolution – explaining why only PowerMacs will run the game.

The dining car offers you the chance to check out some of your fellow travellers.

But what of the story and the actual gameplay itself? The "interactive movie" was once the holy grail of games developers, and although *The Last Express* seems keen to avoid the mistakes of its thousand failed precedents, its status as a "proper game" is still very much in doubt. The basic mechanics work well enough: you can move around the train by clicking on areas of the screen, with the mouse cursor changing shape to tell you which areas you can and can't access. The animation between stop points is smooth (if a bit slow) and talking to characters – another option indicated by the cursor – is slick, if a little pre-ordained. The problems come when you consider what you actually have to *do* to complete the game.

How would you go about solving a murder? Where do you start? What do you do? Difficult questions, unless you're an already committed amateur sleuth. A good adventure game should take you subtly by the hand and guide you along the path to your goal. Of course, there should be problems to solve and clues to puzzle over, but the important thing is that the right way forward is always there to be deduced. More importantly, only really stupid play should get you killed. And this isn't the case here.

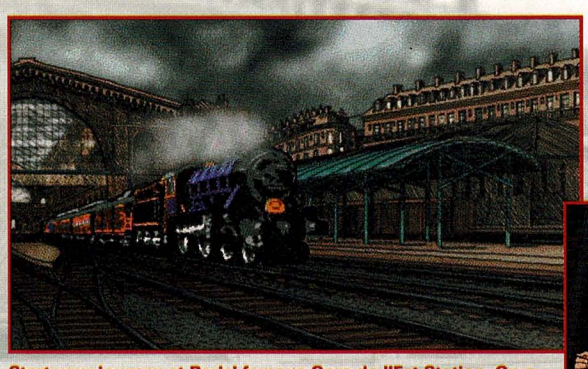
The problem with *The Last Express* is that it consists of a set of tasks that must be completed in the right order at the right time. For the most part, these seem to be a case of trial-and-error rather than reasonable decisions based on logical reasoning. Too often you are dumped out of the game for talking to someone or doing something which seems entirely plausible, but just happens not to fit in with the plot. Play, fail, repeat becomes the way to progress – which is unsatisfying and frustrating.



This mysterious Turkish gentlemen is mixed up in things somewhere.

If you're hardened to the vicissitudes of interactive movies, then there's no doubting that *The Last Express* is the most original of the current crop. At three CDs and over 40 hours of game time, it's also something that you won't complete in one rainy afternoon. Unfortunately, it's also the kind of game that you'll only complete with a spirit of dogged determination. And perhaps that's not quite your idea of true entertainment.

JAMES ASHTON



Start your journey at Paris' famous Gare de l'Est Station. On a wet afternoon by the looks of things – most unseasonal for July.

The only appearance your friend Tyler makes alive in the game. Your first objective is to find his body and hide it from the police.

The last word

The Last Express takes place in the three days and nights it took the Orient Express to cross Europe. In order to provide the 30 interactive characters with enough realistic dialogue, the producers had to write a 600-page game script!

The Last Express

Although beautifully designed and realised, *The Last Express* soon degenerates into a frustrating exercise in trial-and-error.

Graphics	**83%**
Sound	**78%**
Gameplay	**67%**

MF rating 70%

WE GUARANTEE TO BEAT ANY OTHER PRICE LISTED!!

GAMEplay

A DIVISION OF INTERACTIVE COMMERCIAL ENTERPRISES LTD

PRICE! CHOICE! QUALITY! SERVICE!

THESE HAVE MADE US ONE OF THE LARGEST SUPPLIERS OF COMPUTER SOFTWARE IN THE COUNTRY TODAY!!

ALL PRICES INCLUDE VAT & DELIVERY!!

0113 234 0444 SALES HOTLINES
0113 234 0999 TECHNICAL SUPPORT
0113 234 0666 CUSTOMER SERVICES
0113 234 0770 SALES FAX LINE
email: GameplayUK@AOL.com

MACINTOSH CD ROM GAMES

2 FREE GIFTS

WITH EVERY ORDER

EVERY TIME YOU PLACE AN ORDER YOU MAY CHOOSE A PIECE OF SOFTWARE FROM OUR FREE GIFT LIST OF SOFTWARE AND ACCESSORIES. THERE IS A LIMIT OF ONE FREE GIFT PER WEEK BUT NO MINIMUM ORDER VALUE TO QUALIFY. SECONDLY, YOU WILL ALSO RECEIVE OUR LATEST CATALOGUE PACKED WITH MORE OFFERS!

PLEASE REMEMBER TO ASK FOR YOUR FREE SOFTWARE WHEN ORDERING!

DUKE NUKEM 3D & QUAKE

each £24.99!!

Special offer - buy either of the above titles and get £2 off every other item bought at the same time!!

LUCAS ARTS ARCHIVES - INDIANA JONES FATE OF ATLANTIS, SAM N MAX, DAY OF THE TENTACLE, REBEL ASSUALT SPECIAL EDITION, PLUS LUCAS ARTS DEMO AND SAMPLER DISK ALL THIS FOR JUST £32.99

ARCADE ACTION

3D Ultra Pinball	20.99
3D Ultra Pinball 2 Creep Night	18.99
Absolute Zero PPC	28.99
Blackthorne	24.99
Carmageddon	CALL - Lowest Price!!
Damage Inc.	27.99
Dark Forces	24.99
Doom 2	20.99
Final Doom	20.99
Havoc	28.99
Hexen	18.99
Hexen Death Kings Add-on	23.99
Marathon CD Enhanced	23.99
Marathon Infinity	27.99
Master Levels of Doom 2 Add-on	24.99
Mechwarrior 2 PPC	28.99
Prime Target PPC	23.99
Prince of Persia 1 & 2 Collection	10.99
Pro Pinball the web.....New Low price	17.99
Rebel Assault 2	19.99
Skull Cracker	26.99
Terminal Velocity	20.99
Ultimate Doom Thy Flesh Consumed	19.99
Worms	20.99
X Wing Collectors Edition	24.99
ZPC	44.99

RPG & ADVENTURES

9	31.99
Amber Journeys Beyond	38.99
Brain Dead 13	9.99
Broken Sword	24.99
Crystal Skull	22.99
Dark Eye	19.99
Full Throttle	23.99
Gabriel Knight 2 Beast Within	18.99
Hardline	27.99
Indiana Jones Desk Top Adventures	8.99
Kings Quest 7	14.99
Last Express	25.99
Lighthouse PPC *NEW*	29.99
Monty Python and the Quest for the Holy Grail	17.99
Mummy Tomb of the Pharoah	25.99
Myst	22.99
Rama	33.99
Shivers *NEW*	24.99
SPQR: The Empires Darkest Hour	43.99
Spycraft The Great Game	31.99
Star Trek BORG *NEW*	29.99
Star Trek Deep Space 9	24.99
Star Trek Klingon	35.99
Star Trek Final Unity.....* New Low Price *	17.99

SPECIAL OFFER!! - Star Trek A Final Unity & Star Trek Omnipedia bundle just £24.99!

The Dig	16.99
Titanic	39.99
Torin's Passage	30.99
Under a Killing Moon	22.99
Zork Nemesis	32.99

BOARD & CARD GAMES

Asterix Caesar's Challenge	25.99
Bridge 8.0 3.5	32.99
Chessmaster 4000	33.99
King of Soltare V1 3.5"	19.99
Monopoly	33.99
Scrabble	37.99

COMPILATIONS

Games of Fame vol 1 - includes FA-18 Hornet, Pathways into Darkness, Crystal Caliburn Pinball and 4 levels of Marathon 2	21.99
Games of Fame vol 2 - includes Loony Labyrinth Pinball, Pegleg, Guider Pro	21.99
Games of Fame vol 3 - includes Warcraft Orcs & Humans, Marathon & 8 missions of A10 Attack	33.99
Hoyles book of Games V4	21.99
Hoyles book of Games V5	24.99
Lucas Arts Archives Vol 1 - includes Day of the Tentacle, Sam n Max, Indiana Jones Fate of Atlantis, Rebel Assault (special edition) and Lucas Arts sampler disk	32.99
Lucas Arts Archives Vol 2 - includes Rebel Assault, Rebel Assault 2, X wing Collectors edition and 3 levels of Dark Forces	46.99
Top Ten Mac Pack - includes Powermonger, Populous 2, Syndicate, Theme Park, PGA Tour Golf 2, Chuck Yeager's Air Combat, Labyrinth of Time, Power Poker, Eagle Eye Mysteries in London & Around the World in 80 Days	29.99
Total War - includes Warlords, Carriers at War 1 & 2, Halls of Montezuma, Rommel, American Civil War 1, 2, & 3, Gold of the Americas & Panzer Battles	36.99
WarCraft BattleChest - includes Warcraft Orcs & Humans and Warcraft 2 Tides of Darkness and Beyond the Dark Portal data disk	53.99
Ultimate Doom & Hexen Bundle	33.95
Marathon Trilogy Box Set.....New	38.99

FLIGHT SIMS

A10 Attack 3.5	29.99
A10 Attack CD rom	29.99
A10 Cuba Missions at Guantanamo Bay 3.5	28.99
A10 Cuba Missions at Guantanamo Bay CD Rom	28.99
Apache Longbow	24.99
F/A 18 Hornet 3.0 *	37.99
F/A 18 Hornet Mission disk - Crisis in Korea 3.5	26.99
F/A 18 Hornet Mission disk - Crisis in Korea CD Rom	26.99
Flight Unlimited	24.99
Flight Sim 4 - Microsoft	34.99
HIND	23.99
Werewolf v Comanche 2.0 (PowerMac only) *	30.99
Hornet V2 bundle	49.99

SPORTS

Actua Golf	22.99
Actua Soccer (PowerMac only)	20.99
Al Unser Jr Arcade Racing (unboxed)	16.99
Alley 19 Bowling	34.99
IndyCar Racing 2	14.99
Links Pro CD Rom	31.99
Links Pro - 5 Course Library vol 1	15.99
Links Pro - 5 Course Library vol 2	15.99
Links Pro - 5 Course Library vol 3	15.99
Links Pro 5 Course Libraries Vols 1, 2, and 3	47.99
Links Pro Course - Valhalla	17.99
Links Pro Course - Valderama	18.99
Nascar Racing PPC	23.99
Virtual Pool	23.99

STRATEGY GAMES

Bedlam	22.99
Caesar II	27.99
Capitalism	25.99
Chaos Overlords	21.99
Command and Conquer	27.99
Conquest of the New World (PPC)	32.99
Connections	34.99
Heroes of Might & Magic 2	32.99
Outpost 1.5	23.99
Over the Reich	33.99
Shanghai 2 Dragon's Eye	17.99
Shanghai Great Moments	24.99
Sim Ant	9.99
Sim City 2000	24.99
Sim City 2000 Collection	31.99
Sim City 2000 Scenarios Vol 1 3.5	9.99
Sim City Classic	9.99
Sim Earth	9.99
Sim Farm	9.99
Sim Isle	27.99
Sim Life	9.99
Sim Tower 3.5	16.99
Sim Tower	16.99
Vikings	36.95
WarCraft BattleChest - includes Warcraft Orcs & Humans, Warcraft 2 Tides of Darkness and Beyond the Dark Portal Data Disk	53.99
WarCraft II Beyond the Dark Portal	14.99
WarCraft II Tides of Darkness	26.99
W Zone Warcraft 2 Add on disk	18.99

WAR GAMES

Allied General	21.99
Close Combat PPC	30.99
D Day The Beginning of the end	19.99
Panzer General (plus Official Strategy Guide)	23.99
Total War	36.99

BUY 2 GET 1 FREE!!

THE FOLLOWING PRODUCTS ARE ALL JUST £8.99 EACH AND IF YOU BUY 2 YOU MAY CHOOSE ANOTHER COMPLETELY FREE!

Game Pack 1, Diamonds, Video Poker, Home Finance Tools, Mission Starlight, Advanced Dungeons & Dragons Collectors Pack, Troubled Souls, 3000 Image Fonts & Arcade Pack

Star Trek Omnipedia

Complete Star Trek Encyclopedia utilising video clips, photos, sound files and text which bring to life three of the TV series and six films. Also includes *Voice Activation* software (requires Power Mac or Quadra AV and microphone for voice recognition) 18.99

SALES LINES OPEN:
MON-FRI 9am - 8pm
SATURDAY 10am - 7pm
SUNDAY 10am - 4pm

NO QUIBBLE EXCHANGE POLICY: IF YOU ARE UNHAPPY WITH YOUR PURCHASE FOR ANY REASON, SIMPLY RETURN THE ITEM IN PERFECT CONDITION WITHIN 48 HOURS OF RECEIPT BY RECORDED DELIVERY AND SUBJECT TO A FEE (10% OR MINIMUM £4), WE WILL SWAP IT FOR ANOTHER ITEM.(THIS OFFER APPLIES ONLY TO ITEMS LISTED IN OUR MOST CURRENT ADVERTS. WE RESERVE THE RIGHT TO REFUSE EXCHANGE IF THE ITEM IS NOT RECEIVED BACK IN PERFECT CONDITION!). STATUTORY RIGHTS NOT AFFECTED.

ORDER WITH CONFIDENCE FROM ONE OF THE LARGEST SOFTWARE SUPPLIERS IN THE COUNTRY! OVER 600,000 SOFTWARE ITEMS SUPPLIED SO FAR. *IT IS OUR HUGE BUYING POWER THAT ALLOWS US TO BRING MANY OF THESE PRODUCTS DIRECT TO YOU AT LESS THAN TRADE PRICES!*

WE PROVIDE ONE OF THE *FASTEST* DELIVERY SERVICES AROUND, 2-3 WORKING DAYS MAX ON STOCK ITEMS. *(PLEASE ALLOW 8 DAYS FOR CLEARANCE IF SENDING A CHEQUE)*

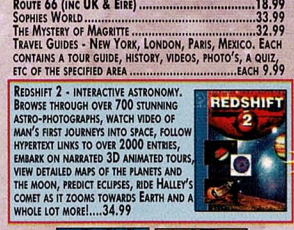
1ST CLASS DELIVERY FREE OF CHARGE TO U.K. MAINLAND. NEXT DAY DELIVERY FROM £4. PLEASE ORDER BEFORE 3PM TO ENSURE DESPATCH.

HOME & REFERENCE

MICROSOFT SPECIAL OFFERS

	RRP	OFFER
Ancient Lands	£34.99	£24.99
Art Gallery	£49.99	£32.99
Cinemania '96	£29.99	£19.99
Cinemania '97	£34.99	£24.99
Creative Writer & Fine Artist	£59.99	£40.99
Dangerous Creatures	£29.99	£24.99
Dinosaurs	£29.99	£24.99
Encarta '96	£49.99	£44.99
Music Central '97	£34.99	£24.99
Wine Guide	£34.99	£26.99

A brief history of time	32.99
Art Gallery	33.99
Corel all Movie Guide 96	19.99
Crazy for Ragtime	32.99
Ferrari/Porsche Legends - include photo's, videos, specifications, history, etc ..... each	12.99
Kai's Power Goo	42.99
Land Designer 3D	25.99
Le Louvre	25.99
Lost Treasures	25.99
Microsoft Cinemania 96 UK	19.99
Monty Pythons Complete waste of time	27.99
Oxford English Dictionary (2nd ed)	224.99
Oxford Reference Shelf	34.99
Oxford Study Shelf	17.99
Oxford Writers Shelf	16.99
Oxford Writers Shelf 3.5	17.99
Peter Gabriel's Eve	33.99
Route 66 (inc UK & Eire)	18.99
Sophies World	33.99
The Mystery of Magritte	32.99
Travel Guides - New York, London, Paris, Mexico. Each contains a tour guide, history, videos, photo's, a quiz, etc of the specified area ..... each	9.99



Redshift 2 - Interactive Astronomy. Browse through over 700 stunning astro-photographs, watch video of man's first journeys into space, follow hypertext links to over 2000 entries, embark on narrated 3D animated tours, view detailed maps of the planets and the moon, predict eclipses, ride Halley's comet as it zooms towards Earth and a whole lot more!....34.99

Your Computer Pets!

Dogz & Catz live on your computer's desktop where they can eat, sleep, play games and run around. Born as puppies and kittens they develop a unique look and personality EACH £13.99

DORLING KINDERSLEY

Castle Explorer	18.99
Childrens Multimedia Dictionary [8-12]	18.99
Chronicle of the 20th Century	23.99
Encyclopaedia of Space & Universe	24.99
Eyewitness Encyclopaedia of Nature	23.99
Eyewitness Encyclopaedia of Science 2.0	23.99
Eyewitness Photo Gallery: Birds	9.99
Eyewitness Photo Gallery: Catz	9.99
Eyewitness Photo Gallery: Children	9.99
Eyewitness Photo Gallery: Classic Cars	9.99
Eyewitness Photo Gallery: Dinosaurs	9.99
Eyewitness Photo Gallery: Flowers	9.99
Eyewitness Photo Gallery: Insects & Beetles	9.99
Eyewitness Photo Gallery: Wild Animals	9.99
Eyewitness Virtual Reality Bird	21.99
Eyewitness Virtual Reality Cat	21.99
History of the World	23.99
My First Amazing World Explorer Activity Pack [4-9]	20.99
My First Incredible Amazing Dictionary & Activity Pack	19.99
PB Bear's Birthday Party [3+]	18.99
Stowaway	19.99
Ultimate 3D Skeleton	19.99
Ultimate Human Body 2.0 [10+]	23.99
Virtual Reality Dinosaur Hunter	18.99
Way Things Work 2.0 [8+]	23.99

CHILDREN & EDUCATION

DISNEY

101 Dalmations Animated Storybook - Disney [ages 3-7]	27.99
Aladdin Activity Centre [5+]	33.99
Hunchback of Notre Dame [3-9]	33.99
Lion King Activity Centre	30.99
Lion King Animated Storybook	32.99
Pocahontas Animated Story Book [up to age 9]	32.99
Toy Story Animated Storybook [3+]	32.99
Winnie the Pooh & the Honey Tree [up to age 7]	33.99

BRODERBUND

Arthur's Birthday Surprise [6-10]	22.99
Arthur's Reading Race [3-7] (US)	27.99
Arthurs Teacher Trouble [6-10]	21.99
Berenstein Bears Get In a Fight [3-8]	22.99
Berenstein Bears In the Dark [3-8] (US)	27.99
Dr Seuss's ABC [3-7]	22.99
Dr Suess Green Eggs and Ham [3-7]	23.99
Harry and the Haunted House [3-8]	23.99
Just Grandma and me [3-8]	23.99
Little Monster at School [3-8]	23.99
Logical Journey of the Zoombinis	24.99
Maths Workshop	23.99
New Kid on the Block [6-12]	22.99
Ruffs Bone [3-8]	22.99
Sheila Rae the Brave [3-7]	23.99
Stellaluna [3-7]	23.99
Tortoise & The Hare [3-8]	23.99

ANGLIA MULTIMEDIA

ALL ANGLIA'S "EXPLORING" RANGE ARE ALIGNED DIRECTLY TO THE NATIONAL CURRICULUM

Blinky Bills Ghost Cave [3-10]	13.99
Eureka! [9-adult]	19.99
Exploring Geography	22.99
Exploring History	22.99
Exploring Wildlife	22.99
Exploring Science	22.99
Exploring Reading 1	19.99
Exploring Reading 2	19.99
John Hedgecoes Guide to Photography + free book	22.99

SPECIAL OFFER!! - BUY 2 ANGLIA MULTIMEDIA TITLES AND GET ANOTHER FREE!!!
(DOES NOT INCLUDE BLINKY BILL'S GHOST CAVE)

IONA

Amazing Maths 8 - 12	13.99
Baileys Book House 2 - 6	13.99
Kid Desk 3 - 10	13.99
Mighty Maths Carnival Countdown 4 - 8	19.99
Might Maths Number Heroes 8 - 12	19.99
Muppets Beginning to Read 3 - 7	13.99
Muppets Read Listen and Learn 3 - 7	13.99
Sammy's Science House 2 - 10	13.99
Stanleys Sticker Stories 3 - 7	13.99
Thinkin Things 4 - 8yrs	13.99
Thinkin Things 2, 6 - 12yrs	13.99
Thinkin Things 3, 8 - 12yrs	13.99
Trudy's Time and Place House 3 - 8	13.99

INTERACTIVE STORYBOOKS

Dragons	23.99
Gregory and the Hot Air Balloon	17.99
Henry's Party - The Farm Yard	17.99
Liam Finds a Story	26.99
Magic Tales Baba Yaga and the Magic Geese	24.99
Magic Tales Imo and the King	24.99
The Fish Who Could Wish	17.99
Winnie the Witch	17.99

OTHERS

ACACIA'S Revise Series - Pass your GCSE or your money back! Chemistry, Biology & Physics ..... each	£16.99
Casper's Brainy Book	24.99
Jan Pienkowski's Haunted House	19.99
Jump Ahead - Discovery Tree	25.99
Jump Ahead - Pre-School	25.99
Jump Ahead - Starting School	25.99
Jump Ahead - Toddlers	19.99
Jump Ahead - Year 1	25.99
Jump Ahead - Year 2	25.99
Magic School Bus Explores Human Body/Ocean ..... each	25.99
Marty and Trouble with Cheese & Where is Morgan	24.99
Power to the Little People Collection	24.99
Sim Park NEW	25.99
Sim Town	17.99
Softkey Stories - Jack & the Beanstalk, Goose & the Golden Egg, Princess & the Pea, 3 Little Pigs ..... each	14.99
Timewarp of Dr. Brain	23.99

DTP & GRAPHICS

Corel Draw 6 Suite Full Product	292.99
Corel Gallery	22.99
Corel Gallery 2	29.99
Corel Mega Gallery 110,000	44.99
Corel Printhouse	22.99
Corel Word Perfect Suite Upgrade	69.99
Corel Word Perfect Suite Full Product	137.99
Adobe Acrobat V3	174.99
Adobe Collection (Photoshop 4, Illustrator 6, Dimensions 2, & scmReady)	584.99
Adobe Dimensions v2 3.5	119.99
Adobe Illustrator V6	329.99
Adobe Photo Deluxe V1	81.99
Adobe Photoshop V4	444.99
Adobe Publishing Collection 1.0 - includes PageMaker, Photoshop, Illustrator & Acrobat	999.99

LANGUAGE

Transparent Language French Now	58.99
Transparent Language German Now	58.99
Transparent Language Italian Now	58.99
Transparent Language Latin Now	58.99
Transparent Language Russian Now	58.99
Transparent Language Spanish Now	58.99
Talk Now: Learn French	23.99
Talk Now: Learn German	23.99
Talk Now: Learn Greek	23.99
Talk Now: Learn Irish	23.99
Talk Now: Learn Italian	23.99
Talk Now: Learn Japanese	23.99
Talk Now: Learn Norwegian	23.99
Talk Now: Learn Russian	23.99
Talk Now: Learn Spanish	23.99

JOYSTICKS & WHEELS

GRAVIS FIREBIRD GRAVIS MOUSESTICK

Gravis Blackhawk	48.99
Gravis Firebird Joystick	68.99
Gravis GamePad	24.99
Gravis Mousestick II	41.99
Assorted Mouse Mats - call for designs..	each £1.99

Microsoft Sidewinder Pro Joystick Only.....£58.99

THRUSTMASTER PRODUCTS

Thrustmaster T2 Steering Assembly

Comes with Steering Wheel, Gearstick, Pedals & Programm-able Buttons. RRP £199.99
OUR PRICE £124.99

RCS Rudder Control	£99.99
Thrustmaster Mk1 Flight Control System FCS1	£99.99
Thrustmaster Mk1 Weapons Control WCS1	£64.99
Thrustmaster Professional Flight System - includes Mk1 Flight Control System, Mk1 Weapons Control System & RCS Rudder Control	ALL FOR JUST £244.99

Top Gun Official Joystick

4 Way Hat Switch, Weighted Base, 3 Beveled Buttons, Quick Action Trigger and Thrustmaster quality and durability! All for only **£37.99**

UNLIKE MANY OF OUR COMPETITORS, WE ONLY SELL GENUINE UK SUPPORTED THRUSTMASTER PRODUCTS, NOT UNSUPPORTED US IMPORTS. WE OFFER FULL TECHNICAL BACK-UP AND HAVE A READILY

PLEASE RING TO CONFIRM AVAILABILITY BEFORE ORDERING AS SOME SPECIAL OFFERS ARE LIMITED STOCK & SOME ITEMS MAY NOT HAVE BEEN RELEASED AT TIME OF PUBLICATION

GAMEplay

Cut out this order form and post to :
GAMEPLAY, UNIT 3, TAVERNERS WALK, NORTH STREET, LEEDS, LS7 1AH

Item Description	Format	Price
		£
		£
		£
		£
		£
		£
	P&P	£
	TOTAL	£

Name:.....Customer No:.....

Address:.....

.....

Postcode:.....Signature:.....

Tel:.....Fax:.....

Postage is **FREE** for all orders shipped within the U.K. Overseas postage - £2.50 per software item. Optional NEXT DAY DELIVERY available from £4.00. Please order before 3pm to ensure immediate despatch.

Cash ☐ Cheque ☐ Postal Order ☐ Card ☐ Access VISA DELTA SWITCH

Cheques payable to 'Gameplay'.
Prices correct at time of going to press. E & OE.
SOME PACKAGING MAY BE SHOWN FOR ILLUSTRATION PURPOSES ONLY

Card No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Expiry Date ☐☐/☐☐ Issue No. ☐☐ (Switch only)

MFT(8)

ONE FREE OFFER ITEM WITH EVERY ORDER! (Limited to ONE per person per day)
With every order, you can choose one of the following FREE... MYST, DESCENT, 3D ATLAS, CINEMANIA '94, GROLIER '95, DAEDALUS ENCOUNTER, WACKY JACKS, PEANUTS YEARN TO LEARN, THE WAY THINGS WORK, ROCK-RAP-N-ROLL, 5 FLOPPY DISKS, MODEM CABLE or MOUSE MAT

NOW OPEN SATURDAY 10AM-4PM For Phone Orders

PLEASE PHONE FOR ADVICE AND FREE CATALOGUE

EMERALD
CREATIVE TECHNOLOGY

HOW TO ORDER
PHONE
0181-715-8866
FAX
0181-715-8877
E-MAIL
100101.1027@COMPUSERVE.COM
or WRITE to:
EMERALD

DUKE NUKEM 3D + QUAKE
WE DAREN'T PRINT THE PRICE OF THIS OFFER... IT'S SO **SPECIAL** - CALL!!!

REMEMBER ALL EMERALD PRICES INCLUDE 17.5% VAT! REMEMBER WE WILL MATCH ANY PRICE!

TERMS AND CONDITIONS
When ordering, please don't forget to include carriage! Charges within the UK are £2.50 per item for first Class UK Post. Next-day courier service is available within the UK mainland and is subject to availability at a cost of £6.00 regardless of order size.
Please ask for Overseas Delivery Charges and pricing for Scottish Highlands and Islands.
You can pay by:
Credit Card: We only bill your card when we despatch the order... NOT BEFORE!
Cheque: Please make cheques payable to 'Emerald Creative Technology Limited'.
All pricing includes VAT but not carriage. We reserve the right to change prices - you will be informed of any change when you order. Faulty goods will be replaced or repaired if returned within 30 days of purchase. We will refund if we can't repair the goods. It is the responsibility of the customer to check for compatibility of a particular product with existing equipment before buying. Postage will not be refunded on goods that are returned. E&OE
TRADEMARKS/COPYRIGHTS ARE RECOGNISED

LANGUAGES
SPECIAL... Buy Learn to Speak French with Asterix for only £19.95 and get Learn to Speak English with Asterix in 18 different languages, FREE - but only whilst stocks last!

VOCABULARY & PRONUNCIATION TUTORS...	
Vocabulary Builder German	£19.95
Vocabulary Builder Spanish	£19.95
Vocabulary Builder French	£19.95
FULL COURSES (Beginner to A-Level & Business)	
Learn To Speak English	£69.95
Learn To Speak French	£69.95
Learn To Speak German	£69.95
Learn To Speak Spanish	£69.95
Think & Talk French	£49.95
Think & Talk German	£49.95
Think & Talk Spanish	£49.95

REFERENCE
Please also see the Microsoft and Dorling Kindersley categories below...

3D Atlas	£9.95
Ancient Egyptians	£Call
Critical Mass	£34.95
Ency.. of Discoveries + Inventions	£Call
Exploring Castles	£Call
Garden Wildlife	£Call
Grolier 1997	£42.95
Ency. of Science Fiction	£29.95
Learn the Art of Magic	£Call
Nelson and His Navy	£Call
Encarta '97	£41.95
Oxford Concise English Dictionary	£49.95
Oxford Reference Shelf	£36.95
Oxford Science Shelf	£16.95
Oxford Language Shelf	£16.95
Oxford Thesaurus	£16.95
Romans	£Call
SeaShore Life	£Call
Vikings	£Call
Volcanoes	£34.95
World's Weather	£Call

THINKING, THE SCIENCES, ART AND THE HUMAN BODY

Thinkin' Things 4-8	£12.95
Thinkin' Things 2, 6-12	£12.95
Thinkin' Things 3, 8-16	£12.95
Treasure Mountain age 5-9	£29.95
Sammy's Science House 2-10	£12.95
A Brief History of Time	£39.95
Fun School Young Scientist	£21.95
Mr Wonder's Greatest Toyshop 4-9	£24.95
Carmen San Diego Jr Detective	£19.95
Prof. Tim's Incredible Machine V3	£29.95
Widget Workshop 8+	£25.95
The Lost Mind of Dr. Brain 11-100	£23.95
1000's of Brain Busting Puzzles - Adventure!	
Time Warp of Dr. Brain 11-100	£23.95
Encyclopaedia of Space and the Universe by DK	£27.95
Red Shift 2 CD	£32.95
Science Blaster Jr. age 4-7	£29.95
Solar System Explorer	£34.95

ART AND ART COLLECTIONS

A Passion For Art	£37.95
Microsoft Art Gallery	£34.95
Ages of Flemish & Dutch Art	£34.95
ArtRageous	£29.95
Bellini-the "Feast of the Gods"	£34.95
Cezanne	£24.95
Le Louvre	£34.95
Leonardo The Inventor	£34.95
Magritte	£34.95
Monet, Verlaine, Debussy	£19.95
Musee d'Orsay	£34.95
Picasso	£34.95
Rings-Five Passions in World Art	£34.95
Stroll Through 20th Century Art	£34.95
Vermeer	£34.95

BODY & HEALTH

Adam 9 Month Miracle	£34.95
Adams Inside Story **1997 version**	£34.95
Anne Hooper's Sex Guide DK	£24.95
Bodyworks 5	£34.95
Ultimate 3D Skeleton	£23.95
Ultimate Human Body	£23.95

MICROSOFT

Ancient Lands	£25.95
Art Gallery	£34.95
Cinemania '97	£25.95
Cinemania '94	£4.95
Complete Speller V6	£69.95
Creative Writer & Fine Artist pack	£45.95
Dangerous Creatures	£25.95
Dinosaurs	£25.95
Encarta '97	£47.95
Magic Bus - Human Body	£25.95
Music Central '97	£25.95
Musical Instruments	£25.95
Ultimate Haunted House	£25.95
The Wine Guide	£10.00

NEW KIDS STUFF!!!

Great Green Mouse Disaster 5-11	£19.95
Henry's Party - The Farmyard 3-7	£19.95
How Animals Move	£19.95
Lost Treasures of the World	£29.95
Romeo and Juliet	£12.95
Fuzzy and Floppy	£24.95
Amazon Trail	£24.95
Oregon Trail	£24.95
Key Cad Complete	£29.95

DORLING KINDERSLEY

3D Skeleton	£21.95
NEW... Amazing Animals	£29.95
Castle Explorer	£21.95
Children's Multimedia Dictionary	£21.95
Chronicle of the 20th Century	£27.95
Cross Section Stowaway	£21.95
Dinosaur Hunter	£21.95
NEW... Earth Quest	£29.95
Encyclopaedia of Nature	£17.95
Encyclopaedia of Science	£20.95
Encyclopaedia of Space/Universe	£27.95
History of World	£27.95
My First Incredible Dictionary	£21.95
PB Bear's Birthday	£19.95
The Way Things Work v2	£27.95
Ultimate Human Body v2	£27.95
Ultimate Sex Guide	£27.95
World Explorer	£21.95
World Reference Atlas	£34.95
Photo Gallery *Birds/Wild Animals/Cats/Kids*	£7.95ea

READING

INTERACTIVE BOOKS	
Bailey's Book House 2-6	£12.95
Children's Bible Stories	£29.95
Story Book Weaver Deluxe 2-10	£16.95
Arthur's Birthday 6-12	£24.95
Berenstein Bears Get in a Fight 3-12	£21.95
Christmas Story	£19.95
Dr Seuss' ABC 3-8	£24.95
Darby the Dragon	£17.95
Jungle Book	£14.95
Freddie Fish 3-8	£29.95
Fish Who Could Wish	£21.95
Green Eggs and Ham-Dr Suess	£24.95
Gregory and The Hot Air Balloon	£17.95
Harry's Haunted House 3-8	£24.95
Just Grandma & Me 3-8	£24.95
Little Monster At School 3-8	£24.95
Little Turtle age 3-7	£24.99
Marty & the Trouble with Cheese	£17.95
New Kid in the Block 6-10	£14.95
PB Bear's Birthday 3-6	£19.95
Pater's Alphabet Journey 3-8	£12.95
Ruff's Bone 3-8	£17.95
Sheila Rae, the Brave	£24.95
Stellaluna age 3-8	£24.95
The Little Engine 3-8	£24.95
Tortoise and The Hare 3-8	£24.95
FISHER PRICE	
Read and Play Library age 4-7	£29.95
Ready for Pre-School age 3-4	£29.95
Sing Alongs age 3-6	£29.95
SPELLING & GRAMMAR	
Grammar Games 10- adult	£34.95
Kid Phonics No1 4-7	£29.95
Kid Phonics No2 6-9	£29.95
Muppets Read, Listen, Learn 3-7	£16.95
Reading Blaster 6-9	£29.95
Read, Write and Type age 3-7	£29.95
Sesame Street Words 3-6	£29.95
Spell-it 3	£29.95
Word Munchers Deluxe	£29.95
Word Attack 3 age 9-adult	£29.95

MATHS

Adiboo 4-5 years	£24.95
Adiboo 6-7 years	£24.95
Amazing Maths age 8-12	£17.95
Cuckoo Zoo	£14.95
Mighty Math - Carnival age 4-8	£24.95
Mighty Math - Number Heroes 8-12	£24.95
Millie's Math House	£16.95
Alge Blaster 3 14-Adult	£24.95
Cruncher Spreadsheet 10-Adult	£29.95
Geometry Blaster 10-adult	£24.95
Logical Journey of the Zoombinis	£28.95
Math Blaster In Search of Spot 6-12	£29.95
Maths Blaster Junior 4-7	£24.95
Maths Blaster Mystery 10-Adult	£24.95
Maths Munchers Deluxe	£24.95
Math Workshop 6-10	£31.95
Peter's Number Adventure	£12.95
Sesame Street Numbers 3-6	£29.95
Supersolvers Op. Neptune 9-14	£29.95
Treasure Galaxy 6-8	£29.95

GENERAL EDUCATION

Jump Ahead Discovery Tree	£24.95
Jump Ahead PreSchool	£24.95
Jump Ahead Starting School	£24.95
Jump Ahead Toddlers	£24.95
Revise GCSE Mathematics	£16.95
also available in the Acacia Revise series: Physics, Chemistry, and Biology	
Mortimer, Riddles of the Medallion	£Call
Muppet's Treasure Island	£34.95
SIM Town 8-12	£26.95
Treasure Hunt 4-9	£24.95
Tuneland 3-6	£18.95

DRAW, PAINT & ANIMATE

Amazing Animations	£24.95
Stanley's Sticker Stories	£16.95
Kid Pix II 3-12	£28.95
Kid Pix Studio	£33.95
Kid Works Deluxe	£29.95
Multimedia Workshop 10-Adult	£59.95
Batman Cartoon Maker	£19.95
Peter's Colour's Adventures 3-8	£12.95
Print Shop Deluxe Ensemble	£34.95
Simpson's Cartoon Maker	£29.95

ACTION GAMES

Abuse	£34.95
Arcade America	£29.95
Battle Beast	£33.95
Blackthorne	£28.95
Bloodbath at Red Falls	£34.95
Buried in Time	£32.95
Capitalism	£34.95
Chaos Overlords	£23.95
Congo	£34.95
Dark Forces	£24.95
Descent	£9.95
Descent: Levels of the World *(for use with Descent 1 game)*	£9.95
Descent 2	£29.95
Doom II	£24.95
Ultimate Doom	£18.95
NEW... Final Doom	£29.95
D-Zone... 1000 Levels for Doom!	£19.95
Gearheads	£17.95
HAVOC	£29.95
Marathon 1	£19.95
Marathon 2	£19.95
Marathon Infinity	£29.95
Marathon Trilogy	£Call
Mech Warrior 2	£39.95
Prime Target	£29.95
Rebel Assault 2	£29.95
Shivers	£29.95
Space Quest 6 **LIMITED OFFER**	£9.95
Under a Killing Moon	£24.95
WORMS	£23.95
X-Wing Collector's CD	£29.95
Zone Raiders	£29.95

ADVENTURE GAMES

9'	£34.95
After Life	£29.95
Alone in the Dark Trilogy	£39.95
Amber Journey's Beyond	£39.95
Bedlam (Mayhem)	£21.95
Brain Dead 13	£25.95
Broken Sword	£26.95
Conquest of the New World	£29.95
Dark Seed 2	£34.95
The Dark Eye	£29.95
The Dig	£25.95
Discworld	£36.95
Discworld 2	£Call
Dust	£24.95
Elk Moon Murder	£24.95
Frankenstein	£24.95
Full Throttle ('Special Edition' & Hints/Tips)	£27.95
Gabriel Knight 2	£29.95
Hardline	£29.95
Heroes of Might & Magic V2	£29.95
HEXEN (extra levels? see below)	£29.95
Death Kings of Dark Citadel	£19.95
In The First Degree	£29.95
Kingdom of Magic	£Call
Kingdom - The Far Reaches	£14.95
King's Quest 7	£29.95
L'Affaire Morlov	£24.95
Leisure Suit Larry 7	£24.95
Lighthouse	£Call
Lost Adventures 8 Classics Pack	£34.95
Lost Eden	£19.95
Monty Python's Complete Waste	£29.95
Monty Python's Quest Holy Grail	£29.95
Mummy - Tomb of the Pharoah	£29.95
Myst	£9.95
Obsydian	£Call
Phantasmagoria	£29.95
QIN Tomb Middle Kingdom	£Call
RAMA	£Call
Safecracker	£Call
Secrets of the Luxor	£29.95
Shadow Wraith	£29.95
Sophies World	£31.95
Space Quest 6	£9.95
Spycraft	£Call
Titanic	£39.95
Timelapse	£44.95
Torin's Passage	£29.95
Wing Commander 4	£14.95
Wizardry Gold	£36.95

DISNEY

Aladdin Activity Centre	£32.95
Lion King Activity Centre	£32.95
Winnie the Pooh Storybook	£32.95
Lion King Storybook	£32.95
Pocahontas Storybook	£32.95
Toy Story	£32.95
101 Dalmations	£32.95
Hunchback of Notre Dame	£32.95

PUZZLE, BOARD & CARD GAMES

Bridge V8	£31.95
Crossword Wizard	£24.95
Chessmaster 4000	£35.95
Deluxe Casino Pack - Poker etc	£34.95
Hoyles Games	£32.95
Kings of Solitaire	£9.95
Monopoly	£34.95
Scrabble Deluxe 'Official Version'	£9.95
Shanghai 2 CD	£14.95

JOYSTICKS & GAMEPADS

Microsoft Sidewinder 3D Pro	£64.95
Gravis GamePad	£25.95
Gravis Mousestick 2	£41.95
Gravis Blackhawk Joystick	£51.95
Gravis Firebird Joystick	£79.95
CH Gamepad (the best)	£34.95
CH Flightstick Pro Joystick	£79.95
CH F-16 Fighterstick	£Call
CH Pedals	£Call
CH Pro Pedals	£Call
NEW... Flight Force Joystick	£36.95
Thrustmaster RCS Rudder Control	£102.00
Thrustmaster Flight Control System	£98.00
Thrustmaster Weapons Control Sys	£68.00
Thrustmaster T2 Steering Assembly	£144.00

SIMS

FLIGHT SIMS...	
Apache Longbow	£29.95
A10 Cuba Mission: Guantanamo Bay	£29.95
A10 Attack with Free Mission Editor	£29.95
Commanche	£29.95
F/A-18 Hornet V2.01	£29.95
F/A-18 Hornet V3 PowerPC only	£39.95
F/A-18 Korean Crisis Mission Disk	£24.95
Flight Unlimited	£34.95
Hind Helicopter SIM	£29.95
Microsoft Flight Sim 4	£36.95
Starfighter 3000	£29.95
Tie Fighter Collection	£Call
OTHER SIMS...	
3D Ultra Pinball	£24.95
3D Ultra Pinball 2 - Creep Night!	£29.95
Capitalism	£34.95
Caesar 2	£28.95
Colonization	£19.95
NEW... G-Netix	£34.95
Outpost	£27.95
Pro Pinball: NEW VERSION	£24.95
Sim City	£8.95
Sim City 2000	£26.95
Sim City Collection	£34.95
Sim Ant	£8.95
Sim Earth	£8.95
Sim Farm	£8.95
Sim Tower	£19.95
Sim Town	£19.95

SPORTS

Actua Soccer	£22.95
Alley 19 Bowling	£34.95
EuroManager '97	£DUE AUGUST!
Indy Car 2	£14.95
NASCAR Racing	£24.95
Links Pro Golf	£29.95
Links Pro Course Vol 1, 2 or 3	£18.95
PGA Tour Golf 3 *See Top Ten Pack Vol. 2*	
Trophy Bass Fishing	£24.95
Virtual Pool	£18.95
Zone Raider	£34.95

WAR GAMES

Allied General	£24.95
Panzer General	£24.95
Castles 2	£24.95
Close Combat	£31.95
Command and Conquer	£26.95
Legions 2	£25.95
Total War CD Compilation	£34.95
Warlords II	£34.95
Warcraft *See Games of Fame Vol. 3*	
Warcraft 2	£29.95
Warcraft 2 Expansion set	£14.95
Warcraft Battle Chest	£57.95

COMPILATION PACKS

TOP TEN MAC PACK - 10CDs - Vol. 1
Populous 2, Powermonger, Syndicate, PGA Tour Golf 2, Theme Park, Around the World in 80 Days, Eagle Eye Mysteries in London, Chuck Yeager's Air Combat, Powerpoker and The Labyrinth of Time. £27.95

TOP TEN MAC PACK -10 CDs - Vol. 2
Wing Commander 3, PGA Tour Golf 3, System Shock, Wolfpack, Peter Pan, Spaceship Warlock, Super Wing Commander, Rudyard Kipling's - The Jungle Book, Shockwave Assault. Putt-Putt & Fatty Bear Activity Pack. only £29.95

LUCAS ARTS ARCHIVES - 6CDs - Vol. 1
Day of the Tentacle, Rebel Assault, Indiana Jones & the Fate of Atlantis, Dark Forces Special Edition (3 levels), Sam & Max Hit the Road,Lucas Arts Sampler £32.95

LUCAS ARTS ARCHIVES - Vol. 2
Rebel Assault 1, Rebel Assault 2, X-Wing Collectors, 3 Levels of Dark Forces, Making Magic - making of the film Trilogy, £45.95

GAMES OF FAME - VOL 1
FA18 Hornet Classic, Pathways into Darkness and Crystal Caliburn Pinball, as well as 4 level preview of Marathon2 £19.95

GAMES OF FAME - Vol. 2
Loony Labrynth Pinball, PegLeg, Glider Pro plus a 2 game edition of Eric's Ultimate Solitaire £19.95

GAMES OF FAME - Vol. 3
Marathon, A-10 Attack LE, Warcraft £32.95

ALONE IN THE DARK TRILOGY - CDs
Alone in the Dark 1, 2 and 3 together! £37.95

EMERALD BUDGET OFFERS

MAC PACK VOLUME 1 - 7 Programs!
MYST, Daedalus Encounter, Descent, Concert Ware, Making Music, Rock-Rap & Roll and In Bed with Rednex £29.95

MAC PACK VOLUME 2 - 7 Programs!
3D Atlas, Learn to Speak French with Asterix, Peanuts Yearn to Learn, DK's The Way Things Work, Grolliers Encyclopaedia '95. Cinemania '94 and Wacky Jacks £29.95

BUY MAC PACK 1 & 2 TOGETHER TO RECEIVE CLARIS ORGANISER V1.0 AND CLARIS IMPACT V1.0 FREE!!!

Kings of Solitaire (Floppy)	£9.95
Pirate's Gold (Floppy)	£9.95
Spectre Supreme (Floppy)	£7.95
Scrabble Deluxe	£9.95
Descent	£9.95
MYST	£9.95
Daedalus Encounter	£9.95
Grolier '95	£4.95
Apple Modem Cable	£1.00
8 Ball Deluxe Pinball, Harpoon 2, Stradiwackius & Four Footed Friends, 1CD!	£14.95
Anyone for Cards, Dragon's Lair	£9.95
Journeyman Project Turbo	£9.95
Mac CUBE (200 Sharewares on 7CDs)	£19.95
One Stop CD Shop (10 CDs)	£29.95
Space Ace and Pax Imperia	£12.95
Total Distortion	£14.95
Microsoft Wine Guide	£10.00
Pinochio CD Age 4-7	£7.95
New Kid on the Block	£9.95
Space Quest 6	£9.95

INTERNET STUFF

33.6 Voice/Fax/Data Modem	£109.95
Adobe PageMill, Adobe SiteMill, Claris HomePage, Claris eM@iler, Eudora Pro, CyberFinder	£Call for software prices
DigiPhone Deluxe (Net Phone Calls)	£Call

PRODUCTIVITY

Art Pad 2+Dabble 2+eraser pen	£139.95
Ultra Pad A5	£Call
Ultra Pad A4	£Call
8 Speed CD-ROM Drive	£209.95
3D Landscape Designer	£49.95
Apple Media Tool V1.3	£14.95
Claris Organizer V1 + Impact V1	£19.95
Claris Impact V2 **LIMITED OFFER**	£34.95
Conflict Catcher	£Call
Corel Gallery Vol 1	£29.95
Corel Gallery Vol 2	£34.95
Handwriting Fonts	£24.95
Personality Fonts	£24.95
Kid Desk	£14.50
Klik and Play	£39.95
Disk Doubler	£59.95
Master Juggler Pro	£Call
MacLink Pro	£Call
MYOBv6	£154.95
Norton Anti Virus - SAM	£Call
Norton Suitcase	£Call
Norton Utilities	£91.95
NOW Up to Date + Contact	£19.95
Personal Backup	£Call
Religious ClipArt	£19.95
Route 66 UK + Ireland	£28.95
Route 66 UK + Europe	£39.95
Spellcatcher	£Call
Power GOO	£Call
KPT Power Tools	£Call
KPT Vector Effects	£Call
KPT Convolver	£Call
SoftWindow 3.11 or '95	£BEST PRICES
Stuffit Deluxe + Spacesaver	£82.95
Suitcase	£Call
Translator Pro by MacLink	£Call
Leatherlook PowerBook Carry Bags	£Call
Real Leather PowerBook Carry Bags	£Call

SCREENSAVERS

After Dark 4	£16.95
CATZ CD Screensaver	£12.95
Disney Screensaver	£31.95
DOGZ CD Screensaver	£12.95
Looney Toons Screensaver	£16.95
Star Trek Screensaver	£16.95
Star Trek Next Generation S/saver	£19.95
Simpsons Screensaver	£16.95
Totally Twisted Screensaver	£16.95

STAR TREK

Star Trek Borg	£29.95
Star Trek Deep Space 9	£27.95
Star Trek Final Unity	£34.95
Star Trek Judgement Rights	£29.95
Star Trek Klingon	£32.95
Star Trek Omnipedia	£24.95
Star Trek Screen Savers *(see above)*	

TYPING TUTORS

Mavis Beacon Teaches v2	£34.95
Kid Keys Typing Tutor 4-8	£24.95

QUAY 2 TRAINING CDs

Excel, Microsoft Word	£44.95ea.
Claris Works 3, Freehand 5, Illustrator 5.5, Macromedia Director 4, MS Office, Xpress, Pagemaker 5, Photoshop 3,	£69.95ea.

6 Hours intensive tuition on each CD!

VTC TRAINING CDs
Claris Works, FileMaker, Freehand, Illustrator, Director, PageMaker, Quark, PageMill, Photoshop and Web Master £29.95ea.

MUSIC SOFTWARE/HARDWARE

SEQUENCERS	
Coda Finale *128 stave full notation pack*	£499.95
Coda Finale Allegro *32 stave notation*	£199.95
Concertware Personal	£14.95
Cubasis Starter Pack *Inc. Cubasis, Micro Mac MIDI interface & 10 songs*	£139.95
Cubasis *64 track sequencer*	£118.95
Cubase 3.0 VST	£295.95
Cubase Score	£456.95
Cubase Audio	£744.95
Logic 2.5	£329.95
Logic Audio Module 2.5	£249.95
Logic Audio Package	£579.95
Micrologic XL *Inc: Micrologic, Log 2 Mac Midi interface & demo songs*	£124.95
Opcode FZ Starter Kit *Inc: Music Shop, Band in a Box & Midi Translator 2*	£229.95
Yamaha Music Module *MU10XG - Inc. Cubasis*	£179.95
MIDI INTERFACES	
Micro Mac Midi I/F - *1 in, 1 out*	£47.95
Log 2 Mac Midi I/F *1 in, 3 out, printer thru, metal case.*	£61.95
Translator II Midi I/F *1 in, 3 out, printer thru switch*	£69.95
Translator Pro Midi I/F *2 in, 6 out, 32 channel*	£129.95
Translator Pro Sync Midi I/F *features 2 in, 6 out, 32 channel, SMPTE*	£229.95
SPEAKERS	
ZY-FI Compact - *8W, 18W Peak*	£12.95
ZY-FI *12W, 64W Peak*	£31.95
ZY-FI *36W, 120W Peak*	£46.95
Yamaha Active - *M5 3W/ch*	£48.00
Yamaha Active - *M15 10W/ch*	£68.00
MSMW - *10 25W Subwoofer System*	£116.00

EMERALD CREATIVE TECHNOLOGY LIMITED
Rapid House, 54 Wandle Bank, London SW19 1DW
100101.1027@compuserve.com
Tel: 0181 715 8866 Fax: 0181 715 8877

EDUCATIONAL ORDERS WELCOME
DISCOUNTS ON SELECTED PRODUCTS!

PHONE 0181 715 8866

©Imagine *Graphics* - Nottingham - 1996

PRICE	£19.99	**ON SALE**	Now	**CONTACT**	Omnimedia on 0181 974 6766	**WEB SITE**	http://www.omnicorp.com/
MAC	**Processor:** 68030 • **RAM:** 8Mb	**POWERMAC**	**Processor:** any • **RAM:** 8Mb	**REQUIRES**	**System:** 7.5 • **Screen:** 640 x 480 • **Colours:** 256 •		
Extras: 2x speed CD-ROM drive							

Majestic Alien Encounter

Fancy yourself as a bit of a space age *Indiana Jones?* Then this is your chance to don your khaki shorts and set off in search of treasure. Or something...

She was Earth's finest space cruiser, the SS Majestic, a vessel of "unprecedented luxury" – the Titanic of the future, if you like. And sure enough, her maiden voyage was doomed. As you find out in this game, after setting sail from Earth, the Majestic disappeared and only a single "lifeboat" was found. The survivors' stories don't tally, and the search for the vessel is about to be abandoned when a faint signal is received, a signal which is supposed to be from the Majestic's locator beacon. And as the nearest field archaeologist, you're sent to investigate.

Quite why an archaeologist is sent to investigate a marooned space cruiser is a thorny conundrum for starters, but off you go nevertheless, alone in your expedition shuttle. What then unfolds is a whodunnit, or rather a *whodunwhat* adventure, exploring the Marie Celeste spacecraft for clues to its downfall. Hints are there to be picked up, pointing you in the direction of your booty – an ancient artefact.

This rack of missiles will come in handy if and when you find yourself under alien attack.

But you don't rush into a 3D world to do battle with monstrous space aliens in a *Marathon*-type environment. Rather, you sit in the comparative safety of your own craft, sending a series of probes – or VR Nodes as they are rather grandly referred to – down to the Majestic to do your dirty work in a virtual reality environment. This, it seems, is explanation enough for why the action all takes place in a central window hardly bigger than the size a box of Cook's matches: you're not actually there, you're watching it on a computer screen.

Via the probes, you have three tools or actions at your disposal, which you must apply to objects in each scenario by clicking your mouse. Having only three options – Torch, Link and Scan – is a bit limiting. What's more, your view is restricted to a series of static screens, and your actions are further compounded into educated guesses as to which action to apply to which object, in which order. There are times when, despite the scrambled messages in your ears and the juxtaposition of space-age surroundings and some inexplicably old-fashioned furniture, *Majestic* feels more like a problem-solving equation than an interactive game.

The adventure that unfolds is a problem-solving investigation, with snippets of insight and some random button-pressing and number guessing. The mystery surrounds an artefact and the fact that scientists believe it to be some kind of portal to "trans-dimensional travel" to some alien race. You also encounter a dodgy-sounding antiquities collector, the Baron of Sombury, a journey, a detour, a scrambled radio message and the inevitable attack on the Majestic by some aliens who – and you'll kick yourself if you hadn't already guessed – want the artefact for themselves. Your tasks involve finding, retrieving and selectively using the conveniently-planted Electronic Companion, Phase Viewers, Translators and the artefact itself – then destroying the stricken Majestic.

When you arrive at the Majestic, send a node down to each area of the ship indicated. When they dock at the vessel's surface use the (blow)Torch to cut a hole through the bulkhead.

DIGITAL LINK
Arrived in Termorp. Left Termorp. Life shuffles on. The only bright spot about this trip has been bumping into my old friend, Roland Carson, the Baron of Sombury, on my way to the bridge. He told me to watch for icebergs. I'll try to heed his advise
BACK
PREVIOUS
NEXT

Using the Link tool gives you access to the Digital Link facilities – data-sources that don't involve talking to people. Here, Captain Reynolds's log hints heavily at Titanic problems ahead.

What's frustrating is that this is a mish-mash of stories, games and genres whose flavours you fleetingly recognise before they are whisked away again into the all-encompassing stew. The Titanic story is ripped off throughout (stricken cruiser, maiden voyage), as is the *Indiana Jones* series (lone archaeologist hero defies odds and hunts artefact). So is any SF space yarn that springs to mind (*Star Trek, 2001: A Space Odyssey*), and even other adventure games (such as *Discworld*). This might have proved a good idea if such references had been used in a self-aware parody, but *Majestic* doesn't add to, expound on or cleverly parody attractive elements from any of these genres. Rather, it chews them up and spits them out.

The truth is that this game does not follow a particularly compelling path and does not offer the freedom of exploration that CD sizes, compression techniques, QuickTime, and suitable game design and coding can deliver. And this jumbling of genres makes the game both confusing and unoriginal.

JOSSE BILSON

An alien – with remarkably good English – denies responsibility for the state of the vessel. Do you believe him?

Majestic: Alien Encounter

Borrows from too many genres, and the result is confusing and frustrating. Only the price tag drags the score above 50%.

Graphics	**60%**
Sound	**45%**
Gameplay	**55%**

MF rating 57%

Left: Venturing deep into the Majestic, you'll find beautiful rooms and corridors, but, frustratingly, you can't explore them freely.

Right: The Bridge is one entry point for your VR Nodes. You use your Scan and Link modes, but initially nothing is working...

PRICE	£9.99	**ON SALE**	Now	**CONTACT**	Omnimedia on 0181 974 6766	**WEB SITE**	http://www.palladiumnet.com/
MAC	**Processor:** 68040 • **RAM:** 8Mb	**POWERMAC**	**Processor:** any • **RAM:** 8Mb	**REQUIRES**	**System:** 7.1 • **HD space:** 6Mb • **Screen:** 640 x 480 • **Colours:** 256 • **Extras:** 2x speed CD-ROM drive		

Pyst

To boldly go where millions of people have been before, why not take a journey to the less-than-mysterious island of *Pyst*?

A strange and sophisticated device of alien construction with some odd purpose? No... it's a washing machine.

If imitation is the sincerest form of flattery, then parody must be the frankest form of comedy. *Pyst* is a parody of *Myst*, so before we review it, we'll just remind you of its target. After all, a parody of an unknown product blunts its comical edge to that of a wet cucumber.

Myst was arguably the first CD-ROM adventure game to be worthy of the title. It packed the 650Mb CD with high quality rendered graphics and sumptuous sounds. It even had gameplay. You walked around an extremely mysterious island, visiting wonderfully rendered scenes and buildings, trying to work out why it was more deserted than Milton Keynes on a bank holiday.

The atmosphere was worthy of *The X-Files* on drugs. There was a sunken galleon in the harbour, ancient machinery, and even a spaceship which looked like it had crashed out of a *Flash Gordon* episode. Admittedly, there weren't actually all that many locations, but the puzzles were so elaborate and obscure, they ensured that you got many hours of play. And frustration.

However, it obviously did something right, because it scored a whopping 95% rating in MACFORMAT 9 and sold four million copies worldwide. But something has happened to the world of *Myst*. It is, in fact, unrecognisable from its former glories, and crass commercialism has flourished. In keeping with it mysterious nature, it has also changed its name... to *Pyst*. And so is born a multimedia parody. Prepare to be suitably amused.

Macs ahoy!

The graphics for the original *Myst* were created on a Mac, and the making of *Pyst* QuickTime video reveals the *Pyst* design offices full of... you guessed it, Macs.

The garden of columns, once a place of peace and tranquillity, has become a place to watch TV. At least that's an improvement then.

The Love Cabin

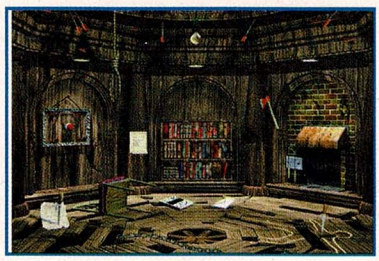
Left: The end comes all too quickly, leaving you feeling unsatisfied and out of pocket. We should know.

Below: The locals have been very verbal, protesting against the possible mutation effects of the power plant. And that's just the rats.

The Chernobyl Room

What is strange about *Pyst* is what it's not. It's not an adventure game like the original. Instead it consists of interactive postcards from the island, showing the current state of all the best known locations, such as the library, the spaceship, and the column garden.

Each scene has a number of hot-spots, and when you click on these, some form of animation is invoked. If this sounds strangely like one of those *Living Books* children's CDs, then we've succeeded in conveying your role. Point, click, giggle. Point, click, stare. Point, click, yawn. Next postcard. Return to step one.



If you played *Myst*, the library scene is mildly amusing. If you didn't, then it's as funny as... well, a library.

In parallel with the original, there's an accompanying QuickTime movie showing the making of *Pyst* (and all the money and staff it took to do it). And this only serves to make you more frustrated that it's *so* bad.

For a start, there are just ten postcards. Some have as many as a dozen animations, most have less, and the last has but one. This means that in a spare hour one evening you can view the whole thing, and still have time to do the ironing.

The next complaint is that the island has been trashed so badly that the beautiful rendering of the original has been reduced to some rather poorly drawn backgrounds in 256 colours. And the haunting music and sounds have been replaced by actors with annoyingly strong American accents.

John Goodman, the genuinely funny star of *Roseanne*, makes a couple of cameo appearances as the king of the island, but looks more embarrassed than Hugh Grant in that police mug shot. He also sings the *Pyst* song that comes as an audio track on the CD. Admittedly, it's not bad, but it's got nothing to do with the rest of the CD, concentrating more on the licence to say the word "pissed". Boredom seven, subtlety nil.

Heavily emphasised is the dedicated *Pyst* Web site that is designed to complement the program. And it does indeed complement the CD in the sense that it too is dull and pointless. Its highlight is the ability to send messages to fellow *Pyst* fans – if that's how you really want to spend your spare time...

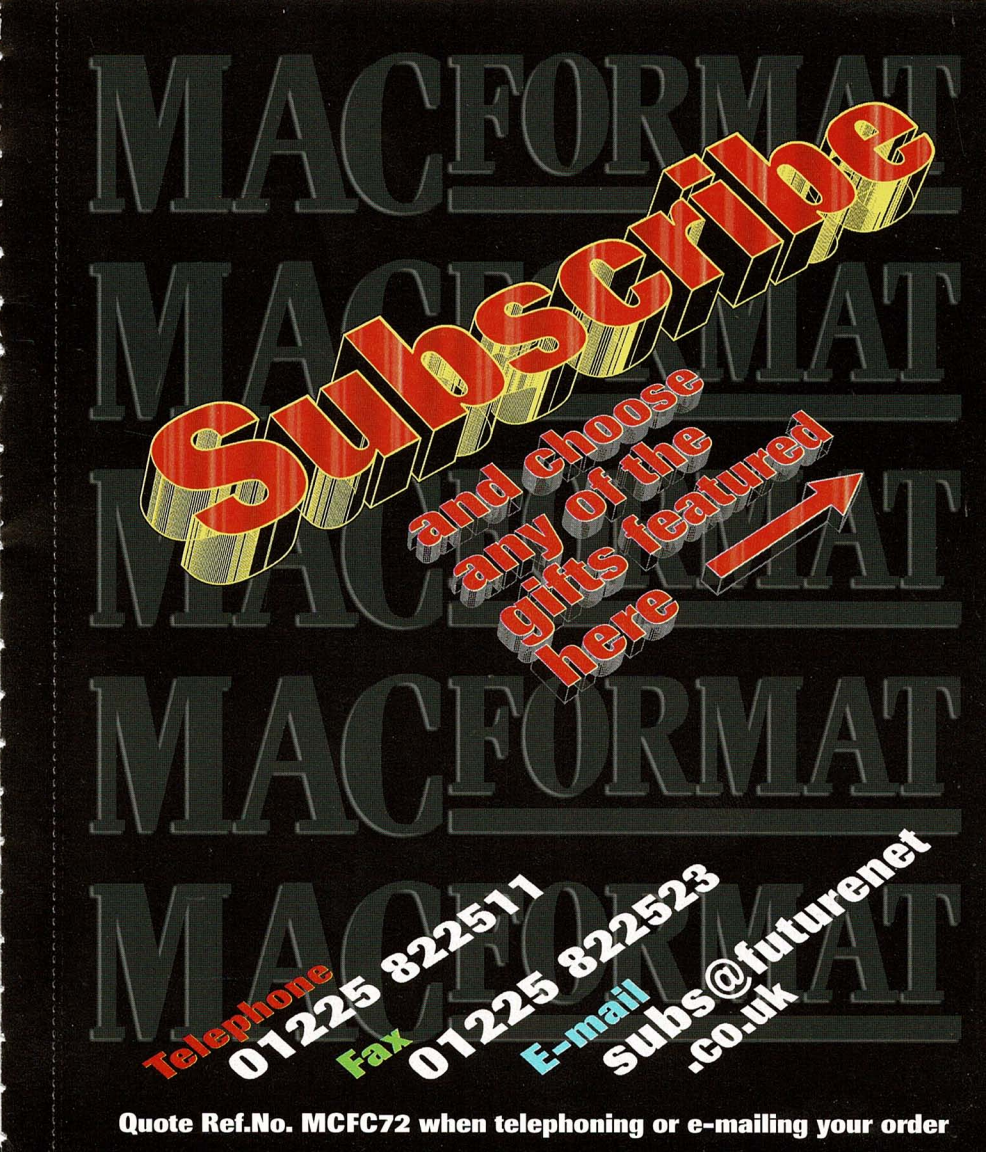
Parody is a very difficult art form, and while this may not be in the same league as *Spinal Tap*, the basic concept is very good and it's well targetted. *Myst* is extremely well known, even by those who've never played it. Those who did play all share the same neurosis of being stuck in the library with no exit, or faced with the task of setting the hands of a clock to a specific time with apparently no clues. This makes it ripe for parody, but it should have been a game!

Yes we know it's very cheap, but it's like buying a meal from a café and finding a toe in the fry-up. The grease-encrusted cook shrugs and says "What do you expect for a couple of quid?" We'd much rather have paid a bit extra and received something more interactive. John Goodman's fee could have been taken and spent on a rendering package instead. It would have resulted in more worthy graphics, and saved a great comedian from shame. **DEREK SMITH**

Pyst

If you played *Myst*, are on the Net and like *National Lampoon*, you might consider buying *Pyst*. Just.

MF rating 51%


MACFORMAT
Subscribe
and choose any of the gifts featured here
Telephone
01225 822511
Fax
01225 822523
E-mail
subs@futurenet.co.uk
Quote Ref.No. MCFC72 when telephoning or e-mailing your order

Please start my subscription to MACFORMAT

Name _____

Address _____

_____

_____ **Postcode** _____

Daytime telephone no _____

European Subscribers quote your EC VAT reg No

_____

Please start my subscription with Issue No. _____

☐ Please start my subscription at the discount rate ticked below

☐ Please extend my subscription at the discount rate ticked below*

*(If you are extending your subscription by Direct Debit, the full amount of your subscription will be debited at the time of renewal)

BEST DEAL UK Direct Debit	12 issues	☐ CD £54.88
Cheque and Credit card	12 issues	24 issues for the price of 16
UK	CD ☐ £59.88	CD ☐ £79.84
Europe (inc Eire)*	CD ☐ £69.68	CD ☐ £104.55
Rest of World*	CD ☐ £88.08	CD ☐ £141.35

My choice of free gift is:

_____

(One gift only per subscription. All are CD-ROM versions only)

*Overseas prices quoted are for air mail.

UK readers: return this coupon by Freepost to:
MACFORMAT Subscriptions, Future Publishing Ltd, FREEPOST BS4900, Somerton, Somerset TA11 6BR

Overseas readers: return this card (postage payable) to: MACFORMAT Subscriptions, Future Publishing Ltd, Carey Court, Somerton, Somerset TA11 6TB, United Kingdom

MCFC72 ☐ Please tick this box if you would prefer not to receive information on other offers

Please choose your method of payment

1. ☐ **Direct Debit.**
The full amount of your subscription will be deducted in advance and in one lump sum. Please complete the mandate below (Direct Debit instructions cannot be photocopied or sent via e-mail or fax)

2. ☐ **Cheque** (payable to Future Publishing Ltd)
(We can only accept sterling cheques drawn on a UK bank account)

3. ☐ **Visa** ☐ **Mastercard** Expires _____

Card no. _____

Signature _____ Date _____

DIRECT Debit

Instruction to your Bank or Building Society to pay Direct Debits. Originator's Identification No. **9 3 0 7 6 3**

1. Name and full postal address of your Bank or Building Society branch

To: The Manager (Bank name) _____

Address _____

_____ Postcode _____

2. Name(s) of account holder(s)

_____

Future Publishing Ref. No. (office use only) _____

3. Branch sort code | | | | | | |

4. Bank or Building Society account number | | | | | | | | |

5. Instruction to your Bank or Building Society
Please pay Future Publishing Ltd Direct Debits from the account detailed on this Instruction, subject to the safeguards assured by the Direct Debit Guarantee

Signature(s) _____ Date _____

Banks and Building Societies may not accept Direct Debit Instructions for some types of account

Subscribe

Subscriber Hotline 01225 822511

and choose your free gift!

Make sure you never miss an issue of MACFORMAT! Get Britain's best selling Mac magazine delivered to your door, and choose a valuable gift when you subscribe. Just pick up the phone and call 01225 822511. Or you can use the handy form at the bottom of this page...

Save £5 when you pay by Direct Debit

If you want to pay the lowest price for your copy of MACFORMAT then your best option is Direct Debit. You can save an extra £5 and still get a valuable gift. Complete the Direct Debit mandate on the reply form and post it to us today!

How to subscribe

- By Direct Debit and save £5.

Complete and return the card inserted here – please remember to complete your full bank details. Direct Debit instructions cannot be sent by e-mail or fax.

- By cheque – return your cheque with your completed order form.
- By credit card – fill in your details on the form, or

Telephone: 01225 822511* or Fax: 01225 822523
E-mail: **subs@futurenet.co.uk***
World Wide Web:
http://www.futurenet.com/mags/macformat/macformat.html*
***Quote ref. No. MCFP72 if telephoning or e-mailing your order.**

Current subscribers!

You can extend your subscription with this offer and choose any of the gifts featured.

Money-back guarantee

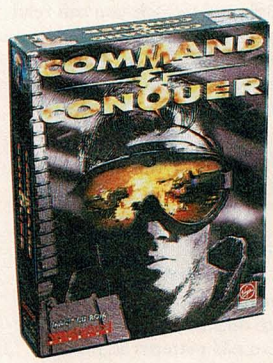
We think you'll love MACFORMAT. We're so sure, we'll even guarantee you a full refund for all un-mailed copies if you decide to cancel your subscription. No risk, no fuss.

12-ISSUE SUBSCRIPTION RATES:

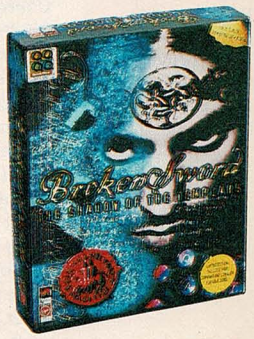
CD edition

- **UK Direct Debit £54.88**
- **UK Cheque/credit card £59.88**
- **Europe (incl Eire) £69.68**
- **Rest of World £88.08**

Choose your gift



Command and Conquer RRP £44.99
Lead your troops through tactical missions in this compelling war game. It's a mix of adventure, strategy and shoot-'em-up, with options to choose between good and evil, or seek-and-destroy multi-players over the Internet.



Broken Sword RRP £44.99
A classic point-and-click adventure with an engaging plot, well crafted characters and nail-biting puzzles. The game is packed with animated sequences, a well produced sound-track and hotspots. Discover more gameplay with the drag-and-drop interface and in witty exchanges. (See our review on page 106)

Color It! 3.2 RRP £29.99
MicroFrontier's brilliant full-colour paint and graphics manipulation package with a huge range of tools and features, including full CMYK support, Levels and Curves filters, Kernel Brush and more. On CD with complete manual in Acrobat format, free filters and extra demos.

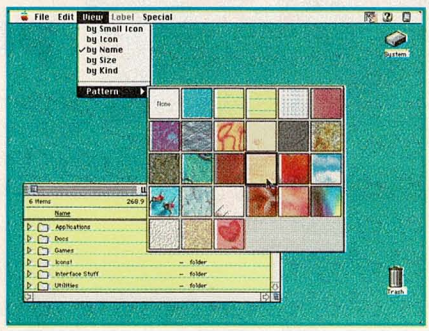
SHAREWARE CENTRAL

Having enjoyed a spell of hot weather, what better way to nurse your sunburn than to stay in and indulge in the shareware on offer this month? At least, that's Brian Smith's excuse.

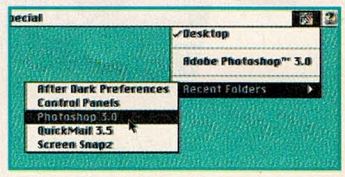
ON THE CD

Try out all of these programs on our Cover CD.

This issue we're serving up another large dollop of the very latest shareware to satisfy your appetite. You'll find a liberal sprinkling of Internet-related utilities and games mixed with the usual applications and handy utilities. It's hardly surprising that there's such a plethora of Internet shareware out there, given that most shareware authors are also Internet users, and most use the Net as the primary way to distribute their shareware. If you're not yet connected to the information superhighway (which you can read all about in our cover feature, starting on page 34) then there's also a few non-Internet shareware games and utilities. So, whatever your networking status is, there's sure to be something of interest here for you this month.



Left: With *Window Monkey*, giving a window a patterned background is just a matter of selecting it and choosing a pattern from the View menu.



Above: *Window Monkey 1.1* also adds a useful menu to the Finder.

Put it about

If you've followed our tips in the past few Shareware Centrals, by now your shareware masterpiece should have received the review it so richly deserves. Now you need to reach your adoring public, perhaps via the Internet. Here are a few tips to help you get started.

Window Monkey 1.1

Control Panel
Shareware, registration fee $20

Window Monkey attempts to roll two functions into one Control Panel. First, it enables you to add patterns to your Finder windows – not a particularly useful feature, but it does help to jazz up your Desktop. The closest System extra we can recall is *Kaleidoscope*, which uses a folder's label colour as its Finder window's background. If you want to set a new background, all you have to do is make your chosen window active and select a new pattern from the **View** menu. There are loads of presets available, but you can easily add your own by copying a suitably sized image into the pattern area of the Control Panel. However, if you're running a version of the Mac OS which doesn't support drag and drop, you'll have to use **Import Patterns** in the **File** menu.

When you assign a pattern to a folder, all the folders contained within that folder use the same pattern by default. This feature can be switched off using the **Cascading Finder Windows Patterns** checkbox. You can also set the colour of text displayed within a window, which can be an extremely useful feature if you have decided upon a particularly vivid background pattern.

The second feature of *Window Monkey* is a window menu that's added to the menu bar in a similar way to *Finder Windows* by Quadratic. It is displayed in all applications, so you can always quickly access their windows, even if they're totally obscured. The menu is divided into three sections: the top part lists all the current application's windows, and under that there is a list of all the other applications that are currently running, with their windows listed in sub-menus. Simply selecting one will make it active. The bottom section of the menu contains a list of recently used folders, and just as in the **Recent Applications** menu option in the **Apple** menu, you can set how many folders it will remember for you. In addition, *Window Monkey* patches Save and Open dialogue boxes, so that they list the most recently used folders.

If you are already using *Finder Windows* or a similar Control Panel, then you might want to consider trying *Window Monkey:* it has all the same features, plus you get the added bonus of replacing all your blank window backgrounds with tasteful patterns!

Battle for the Planets

Game
Shareware, registration fee $15

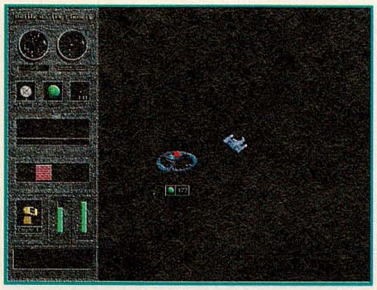
The objective of *Battle for the Planets* is a fairly standard computer game theme – megalomania. It has nothing to do with the similarly named '80s manga cartoon featuring a dodgy evil mastermind and a group of heroes dressed as wild foul. Its closest relative is probably *Extreme Velocity*, although there's only a very superficial similarity.

You start the game in your own solar system, which, unlike the real thing is guaranteed to contain one space station, 16 bases, five wormholes (imaginary voids), one nebula, three planets and an assortment of asteroids. Your mission is simple: you must take over the galaxy by destroying all your opponents. You can play across a LAN or TCP/IP network with up to seven other people, or you can take your chances against a computer-controlled opponent.

You begin the game by piloting a spaceship: at first, it's a rather modestly equipped craft, but you can pick up

What's shareware?

In a nutshell, shareware enables you to "try before you buy" – if you intend to keep using the program, you should pay the fee. The text files that accompany the program will tell you how much it costs and where to send the money. It'll typically cost between US$5 and $40, and when you do pay, the author will often give you something in return, such as a manual or updates. Freeware means there's no fee, but you mustn't alter the program or sell it yourself.



It can get very lonely in space...

extras (such as shields, weapons and so on) from space bases, which automatically build such items randomly. The display below a space base indicates what's currently being built there, and a counter shows how long it will take to complete. When it's done, the extra is then released in a canister. Flying over this will install its contents into your ship, ready for use. You also bolster the life of your ship by docking with a base to repair any damage, and top up your fuel by collecting minerals (debris from blasted asteroids). Wormholes are scattered about too, providing a particularly handy escape route to other solar systems.

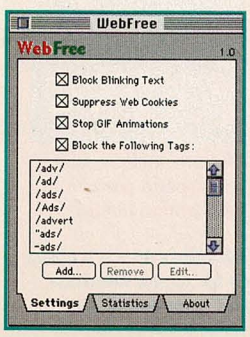
Strangely, it's possible to reach the edges of space (you'll bounce off if you try to fly through them), but that's the only major gripe. The gameplay gets a little repetitive after a while, though, flying around collecting power-ups and then looking for an opponent to kill, then collecting more power-ups and so on. For best results, play this with a real opponent rather than against the computer – after all, there's nothing more satisfying than killing a friend.

WebFree

Control Panel
Shareware, registration fee $20

The freedom to browse and place information on the Net has attracted the attention of authoritarian governments, terrorist organisations and, more annoyingly, advertisers. *WebFree* is a small step in the direction of real Internet freedom. You can block certain images, animated GIFs and those nefarious tattletales called cookies from your browser, saving you time, excessive phone charges and endless annoyance.

WebFree works in conjunction with any Web browser, whether it goes through MacTCP or Open Transport; and once you've got it installed, it should remove adverts from your Web pages. If it misses some, you can also stipulate specific images to ignore by clicking on them: when a pop-up menu is displayed, select the **Block this image with WebFree** option to stop the image being loaded next time the page is visited. This option only works in *Netscape* and *Internet Explorer*, but given that these are the two most popular Web browsers, it's not too much of a limitation.



***WebFree* can banish annoying animated GIFs and remove unwanted adverts.**

One of the most disturbing aspects of using the Web is the idea that your Web browsing can be monitored. "Cookies" are System files that effectively act as preferences from Web sites, storing information about where you've been on the Web, passwords and so on. *WebFree* can block these as well. But, because some sites won't function without cookies, *WebFree* enables you to easily toggle them on and off as you browse. You can also choose to turn off blinking text that flashes to attract your attention, and stop animated GIFs from looping, so they are played through only once.

If you are paranoid or, more likely, have slow Internet access times, then *WebFree* could well be a very worthwhile addition to your Control Panels.

3-D Cannon

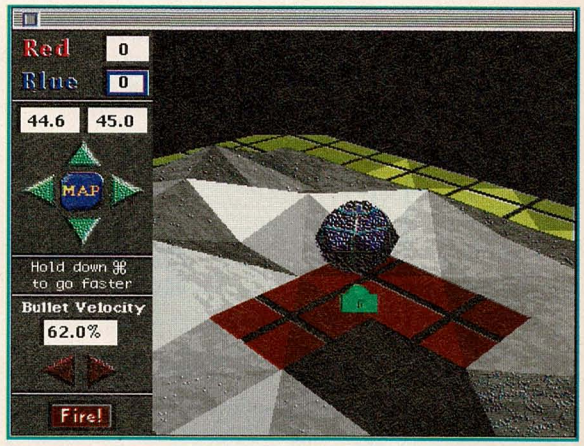
Game
Shareware, registration fee $10

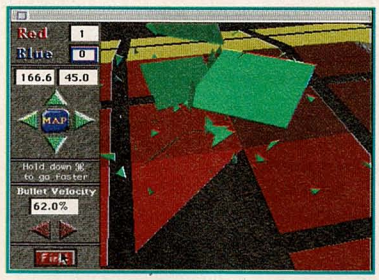
Old computer genres never die, they just get converted into 3D. There was a game written for the Pet, an ancient eight-bit computer, that featured gun turrets scattered around a barren landscape trying to blow the heck out of each other. Suffice it to say that the gameplay has been copied here and given the 3D treatment. Some genres adapt to 3D more readily than others, and thankfully, *3-D Cannon* seems to have survived the transition well.

The basic gist is that you're in charge of a gun turret. You only have one weapon (unlike the original Pet version), but that doesn't limit your fun too much. You can play *3-D Cannon* on your own or with a friend, but playing against the computer is a good way to get used to the gun settings before going on to challenge your mates. The computer controlled opponent can be set to several skill levels, but if you need target practice you'd best start it on level 1 – that will at least give you a fighting chance to get off a few rounds before it finds your range.

You'll need a fairly powerful Mac to get a good, smooth display to play *3-D Cannon*, because it uses 3D graphics. There are a few options that can reduce the strain, either by removing texture mapping, interlacing the main view (only displaying every other line) or altering the size of the view's window.

You control your gun turret with the control panel to the left of the main view or by keyboard shortcuts. To play, you just turn your gun to face the enemy, raise the barrel, set the bullet's velocity and press Fire. You're then shown the bullet flying through the air and, with luck, striking your target. Miss and it's the enemy's turn to fire, and then it's back to you, over to them... and so on. Taking turns does give you the time to line up your shots, and although *3-D Cannon* is perhaps not the most imaginative of games, it's soon very addictive. All it needs are some more varied weapons, a choice of landscapes and more multiplayer options and it'll be perfect!





Above: Oh dear. The computer's finally found its mark.

Left: At last we've hit him! The enemy turret explodes in a shower of polygons.

CustoFinder 7 1.2.4

Control Panel
Shareware, registration fee $5

There are several Control Panels available that unlock the hidden features in Mac OS 7.5, such as *Finder Options*, which was included in our Top 50 Shareware programs round-up back in MACFORMAT 50. *Finder Options* adds such useful keyboard shortcuts as **[option] [delete]** to move items to the **Wastebasket**, and **[control]**-dragging items and make aliases. There are a few bits and pieces that even *Finder Options* has overlooked, but don't worry, if you want a fully functional Finder (try saying that after you've had five pints of lager), then *CustoFinder 7* is the answer.

CustoFinder offers you four previously hidden Finder features. The first is the option to use small icons on your Desktop, so you can cram even more into your 640 x 480 display. Second, you can change the font styles applied to aliases, which can be useful if the font you use degrades into an unreadable mess when it is italicised. Third, you can also set the time and date format using a system based on your **Time and Date** Control Panel settings. And finally, you can display a **Language** menu between the **Help** and **Application** menus, so you can swap the language used in the Finder with just one mouse click. It may come in very handy if you need to work ➤

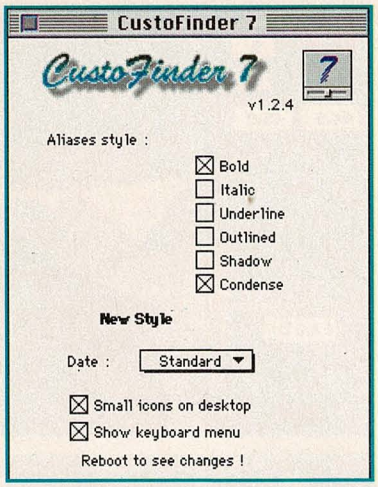
Tip 1

The average Web page is a fairly static, boring affair, so try jazzing it up with loads of animated GIFs – madly spinning globes or epilepsy-inducing flashing text. Visitors to your page will be happy to wait for all these to download.

Tip 2

Don't be afraid to use cutting edge technology in your Web page such as QuickTime VR, Java or *Shockwave*. It may take a few hours for browsers to hunt down the necessary plug-ins, but it's definitely worth it for that flashing, spinning, beeping button.

Now bilingual users can easily switch the Finder to their second language. Anyone for Flemish?



***CustoFinder 7* unlocks a few more useful hidden features of Mac OS 7.5.**

in several different languages, but we'd guess that for most users it'll probably have a rather limited use.

CustoFinder's Control Panel is easy enough to use, but to see any effect in the Finder you'll have to restart your Mac. Mind you, once you've made your changes you won't need to alter the Control Panel again. It's worth a look if you have trouble reading your System font when it's italicised, if your Desktop is crammed with icons or if you desperately need to be able to switch to Norwegian at a moment's notice.

Tip 3

A well ordered Web page is a good Web page, so try to use all the frames you can. That way you can have seven or eight mini pages in one! Worth waiting – or upgrading to a frame-capable browser – for!

KidCalc! and HiTech Calc!

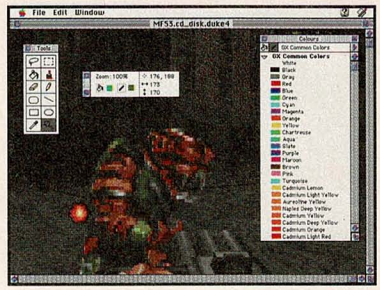
Utility
Shareware. Registration fees: KidCalc! $10, HiTech Calc! $15

KidCalc! and *HiTech Calc!* are available separately, but they're both from the same programmer (and, we'd venture to guess, share much of the same code – not that that makes any odds either way).

They're very similar in function, just replacing the calculator you get free with Mac OS. "So why replace it?" you might ask. Well, because you would miss out on two nicely designed programs. As you can probably guess, *KidCalc!* is styled like those chewable, unbreakable toys you get for really young kids. It's got rounded corners and huge buttons. It also plays strange sound effects when you press its buttons, providing hours of fun for the young at heart. (More for the genuinely young, obviously.) It's also practical, because the larger buttons make easier targets for mouse clicks (although it's still quicker to use the numeric keypad...).

HiTech Calc! is a bit harder to justify. It's the same size as the kiddie version, with large buttons (do we all really have such bad hand-eye coordination?), and it doesn't have any scientific calculator functions. Strangely, there are menu options to display the Windows 3.1 and Windows 95 (the Mexican version!) built-in calculators for comparison. (They're just pictures, though – you can't actually use them.) *HiTech Calc!* comes with loads of extra features, so if you want to, you can change the look of your Desktop to suit its space-age styling: there's a Kaleidoscope colour scheme, an Extension to give you a new pointer,

The *HiTech Calc!* may come with its own Kaleidoscope file, font and cursor, but we still prefer *KidCalc!'s* cool sound effects.



Does *Painting* have a clear interface or just a severe lack of tools? You work it out.

several Desktop patterns and even a high-tech font.

Maybe it's the child within, but even with the *HiTech* extras we still much prefer *KidCalc!* Unfortunately, though, it's not really practical: it covers almost half the screen, and how are you going to persuade a young child to use a calculator, even if it does go "boing!" when you press the **delete** key?

Painting 1.0.2

Application
Shareware, registration fee $15

Painting is a *Photoshop* or *GraphicConverter*-like paint package. Unlike *Photoshop's* colour management, though, it enables you to define individual colour schemes, which is perfect for creating Web graphics and others that use a restricted range of colours. Three colour schemes are provided by default, including the standard Apple icon colours that you have to use to make icons correctly highlight when selected. Separate stroke and fill colours can be defined for the structured shape drawing tools.

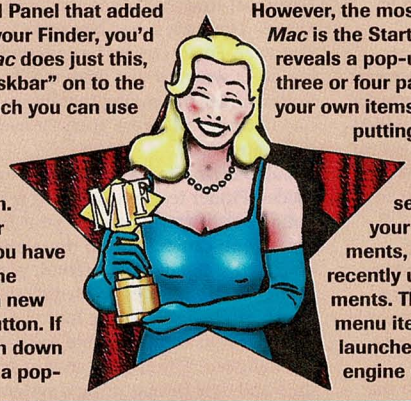
Painting has all the basic painting tools including a pencil and brush, a straight line tool, and empty and filled rectangles and ellipses. Holding down **[shift]** while

GoMac 1.1

Control Panel
Shareware, registration fee $19.95

If we offered you a Control Panel that added Windows 95 elements to your Finder, you'd probably run a mile. *GoMac* does just this, tacking a Windows 95 "taskbar" on to the bottom of your screen which you can use to launch and manage applications. But don't trash it just yet – it's worth deeper investigation.

The main part of the bar lists all the applications you have running, with the active one highlighted. To switch to a new application, click on its button. If you hold the mouse button down while making a selection, a pop-up menu shows how much memory the application uses and gives you the option to quit or hide it. The buttons are drag and drop compliant, so you can launch documents by dragging their icon on to the desired application's button. A clock can be displayed, and a calendar is shown if you click on the clock.



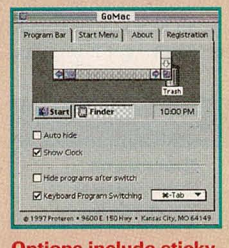
Star of the month

However, the most powerful part of *GoMac* is the Start button: clicking on it reveals a pop-up menu divided into three or four parts. The top section lists your own items, which are added by putting aliases in a Start Menu Items folder in the System Folder. The second section lists all your applications and documents, attached drives and recently used programs and documents. There's also a Find... menu item that by default launches the built-in Finder Find engine – although you can specify another if you want. The third section enables you to hide or display the currently inactive applications and gives access to settings, including your Control Panels, the Extension Manager, Chooser, Monitor

***GoMac* has Mac-ised the Win 95 Start menu.**

Settings and *GoMac's* own preferences. Finally, there is a Shut Down... option available even when you're in an application, not back at the Finder.

***GoMac* replaces the Application menu and most of the Apple menu's functions. As for the Mac stealing the taskbar concept from Windows 95 – it's about time we were paid back for all the interface ideas Bill has "borrowed" over the years.**



Options include sticky menus and automatic application hiding.

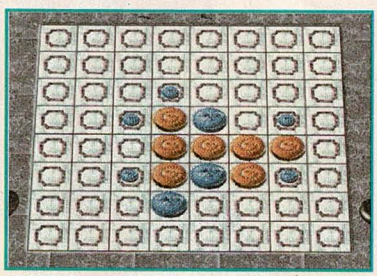
you draw a rectangle or an ellipse constrains its sides to equal lengths. Annoyingly, you have to hold down **[shift]** before you make your selection, which can be a bit confusing if you're used to *Photoshop's* controls.

It's perhaps unfair to compare *Painting* with *GraphicConverter*, which has a higher shareware registration fee ($30) and much more powerful image editing functions. *Painting* does have an edge on the competition with its colour palette functions, which are useful if you're an icon designer and tired of *ResEdit's* limited range of tools – but then, there are several specialised shareware icon designers available. Given more time, and a few version updates, we're sure *Painting* will become a worthwhile alternative to *GraphicConverter*, but at the moment it's just a bit too basic to be particularly useful.

Reversi • The Eclipse

Application
Shareware, registration fee $19.95

Reversi is a computer version of the old board game *Othello*. The rules are simple: you must place your pieces so they capture at least one of your opponent's pieces in between them and one of yours. All the captured pieces then become yours. If you're not sure how to play, then select the **Show Legal Moves** option in the **Settings** menu, and little counters will be placed in squares on the board where you could legally make your next move. You'll soon learn that the squares to go after are the corners because they can't be captured between your opponent's pieces. Once they're taken, they can't be removed.

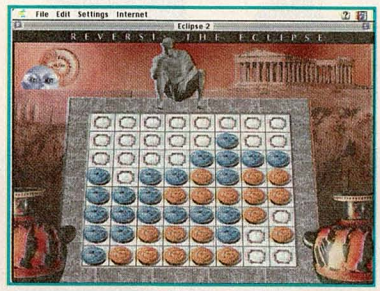


If you are a bit rusty at *Othello*, *Reversi* can show you all the legal moves available.

As you play, the moon and sun shown in the top left of the screen change position to show you how well you're doing; the screen also atmospherically dims and lightens, depending on who's currently winning.

The *Reversi* board can be configured to suit your personal preferences. You can set the viewpoint to 2D or 3D and shrink the window, but strangely, you can't enlarge it again. (Shrink it too much and it totally disappears!) There's also the option to have spoken commentary as you play, but that's likely to be the first thing you disable, because it gets very annoying very quickly.

You can play against either a computer controlled opponent or a human player via an IOS (Internet Othello Server). *Reversi* interprets the character codes sent by the IOS server, so it looks the same as playing against a human opponent in the same room. You'll need to register with an IOS by e-mail first, but then it's just a matter of using your Internet access to link with an IOS server, picking a player and away you go. The rules are deceptively simple but it takes ages to master, so be patient and stick with it.



You can look at the *Reversi* board in 2D or 3D, or choose to have a commentary accompanying your game, although we recommend you turn this rather annoying option off.

Typical 1.0

Utility
Shareware, registration fee $5

Typical is a fairly rough-and-ready utility that changes the file type and creator type of your files. It has a rather strange interface, but if you're into hacking files then you probably won't mind. You specify the file and creator type by editing the name of the *Typical* application (or, as *Typical's* **Read Me** file sensibly suggests, you edit a copy). The first four characters should be the file type, then a separating full stop or a dash, and the last four characters are the creator type. You can then change single files or the contents of whole folders by dragging and dropping them on to the application icon. Don't worry if you make a mistake, because simply double-clicking on *Typical* enables you to restore the original file and creator types.

We're not exactly sure what the point of this utility is. Because you need to know the file and creator types of the application you want your document to open in, you'll need to use *File Buddy* or *ResEdit* to find them in the first place. You could then simply use either of these utilities to change the document's types (although, to be fair, *Typical* certainly has the upper hand when you need to change large numbers of files).

Otherwise, the simplest way to change a file's type and creator is to import it into an application and then export it in the desired format (usually simply by doing a Save). That way there's no need to rummage around applications to find their creator codes. **MF**

Tip 4

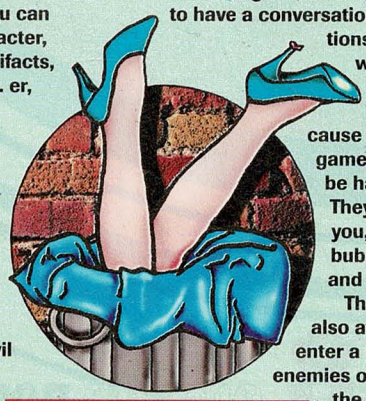
Remember to e-mail every single computer magazine every time you put a new version of your program on the Internet, even if it's just an upgrade from 1.0.0.0 to 1.0.0.1. It's vital to keep them well informed.

Mantra II

Game
Freeware

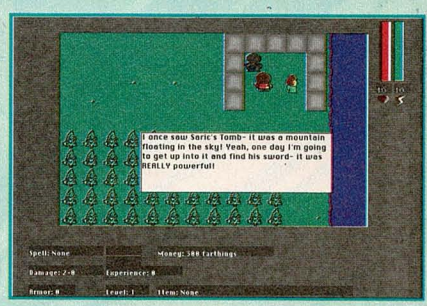
Role-playing games are fun. You can spend hours developing a character, exploring dungeons, finding artifacts, meeting bizarre creatures and... er, killing them. Unsurprisingly, *Mantra II* is a follow-up to the Syzygy Cult's previous RPG, *Mantra* (reviewed in MacFormat 28). You're returned to the kingdom of Zarin, where the peace resulting from your previous success has been disrupted. As the rightful successor to the Saric royal family, you must free the land of the evil that is plaguing it.

The presentation is similar to that of the original game, taking a *Zelda* or *Ultima*-style viewpoint of your adventures. Your character roams around a flip screen landscape talking to characters, fighting creatures and trading in shops. There's more interaction with characters in *Mantra II* than in the original, although you don't actually get to have a conversation or ask specific questions: characters just tell you what's on their mind when you bump into them. And this can cause a problem, because the game runs so fast that it can be hard to escape from them. They continually run into you, triggering their speech bubbles until you get angry and have to kill them...



In the bin

The game's high speed also affects combat. When you enter a new flip screen, all the enemies on it rush towards you. At the start of a game you'll be killed many times before you build up a high enough strength level to survive long enough to do some proper exploring. Admittedly we were playing on a fast Power-Mac (7600/132), but surely the programmers could have put a delay loop in to make it run at a more playable speed on fast Macs.


I once saw Saric's Tomb- it was a mountain floating in the sky! Yeah, one day I'm going to get up into it and find his sword- it was REALLY powerful!
Spell: None
Money: 588 farthings
Damage: 2-8
Experience: 0
Armor: 0
Level: 1
Item: None

You soon discover that the inhabitants of the village you start the game in are *very* talkative.

Worst of all, the characters have no real *character*. They are so obviously computer controlled, saying the same things over and over again and running around bumping into walls. There's no way you can believe in them and get into the spirit of the game. In all, it's just about playable, but it's totally missed the raw addictiveness of *Zelda* and its ilk.

computer arts

The art, de… …hnology m… …Fe…

The complete package for the computer-based creative...

THE MAGAZINE AND CD INCLUDES TUTORIALS, FEATURES, DEMOS AND REVIEWS FOR:

- GRAPHIC DESIGN
- IMAGE MANIPULATION
- 3D RENDERING
- ANIMATION
- ILLUSTRATION
- MULTIMEDIA
- DIGITAL VIDEO
- WEB DESIGN

Issue 8 on sale **now**

COMPLETE WITH DUAL-FORMAT CD-ROM & FREE 32-PAGE MAGAZINE

Issue 9 on sale **7th August**

THE CHOOSER

MACFORMAT'S comprehensive, up-to-date buyer's guide to Mac-related products that are worth your money, based on our own independent, authoritative tests.

Complete guide to Mac models 122
What processor is in your Mac? Can you run the latest software? Thinking about upgrading to a new machine but aren't sure which model you need? Check here!

The MACFORMAT Buyer's Guide 128
The best Mac buying guide to the top Mac products, from modems to video and animation, based on our independent tests.

How to be a smart buyer 128
Advice on your rights as a buyer, whether you shop by mail or in person.

Product News 130
Information on the very latest product releases and upgrades.

Mac user groups 139
Want a helping hand or just a chat? Contact other Mac enthusiasts near you.

Free Reader Ads 139
The best and biggest free marketplace for pre-loved Mac kit. ➤

Mac Facts

MacFormat's guide to every Mac on sale in the UK.

Apple Computer

Apple: 0800 127753	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
All PowerBook 1400s come with the following software: *Apple Internet Connection Kit, Apple Remote Access, Claris Organizer, ClarisWorks, Route 66*														
PowerBook 1400cs/117	PPC 603e	117MHz	No	12Mb	64Mb	1Mb	11.3-inch	750Mb	None	None	2 Type II PC card	None fitted	7.5.3	£1,262
PowerBook 1400cs/117	PPC 603e	117MHz	No	12Mb	64Mb	1Mb	11.3-inch	1Gb	None	None	2 Type II PC card	None fitted	7.5.3	£1,429
PowerBook 1400cs/117	PPC 603e	117MHz	No	16Mb	64Mb	1Mb	11.3-inch	750Mb	6x	None	2 Type II PC card	None fitted	7.5.3	£1,512
PowerBook 1400cs/117	PPC 603e	117MHz	No	16Mb	64Mb	1Mb	11.3-inch	750Mb	8x	None	2 Type II PC card	None fitted	7.5.3	£1,678
PowerBook 1400cs/117	PPC 603e	117MHz	No	16Mb	64Mb	1Mb	11.3-inch	750Mb	6x	None	2 Type II PC card	None fitted	7.5.3	£1,761
Extras: Colour StyleWriter 2200														
PowerBook 1400cs/133	PPC 603e	133MHz	No	16Mb	64Mb	1Mb	11.3-inch	1.3Mb	8x	None	2 Type II PC card	None fitted	7.5.3	£2,261
PowerBook 1400c/133	PPC 603e	133MHz	No	16Mb	64Mb	1Mb	11.3-inch	1Gb	6x	128K	2 Type II PC card	None fitted	7.5.3	£2,593
PowerBook 1400c/133	PPC 603e	133MHz	No	16Mb	64Mb	1Mb	11.3-inch	1.3Gb	8x	128K	2 Type II PC card	None fitted	7.5.3	£2,760
All PowerBook 3400s come with the following software: *Apple Internet Connection Kit, Apple Location Manager, Apple Remote Access, Claris Organizer, WebWhacker*														
PowerBook 3400c/180	PPC 603e	180MHz	No	16Mb	144Mb	1Mb	12.1-inch	1.3Gb	None	256K	2 Type II PC card	None fitted	7.6	£3,541
PowerBook 3400c/180	PPC 603e	180MHz	No	16Mb	144Mb	1Mb	12.1-inch	1.3Gb	12x	256K	2 Type II PC card	Ethernet	7.6	£3,846
PowerBook 3400c/200	PPC 603e	200MHz	No	32Mb	144Mb	1Mb	12.1-inch	2Gb	12x	256K	2 Type II PC card	Ethernet	7.6	£4,374
Software: *SoftWindows*														
PowerBook 3400c/240	PPC 603e	240MHz	No	16Mb	144Mb	1Mb	12.1-inch	3Gb	12x	256K	2 Type II PC card	Ethernet	7.6	£5,075
PowerMac 4400/200	PPC 603e	200MHz	No	16Mb	96Mb	1Mb	Extra	1.2Gb	8x	None	2 PCI	None fitted	7.5.5	£1,108
PowerMac 4400/200	PPC 603e	200MHz	No	16Mb	96Mb	1Mb	15-inch	1.2Gb	8x	None	2 PCI	None fitted	7.5.5	£1,385
PowerMac 4400/200	PPC 603e	200MHz	No	16Mb	96Mb	2Mb	Extra	2Gb	8x	256K	2 PCI	Ethernet	7.5.5	£1,317
PowerMac 4400/200	PPC 603e	200MHz	No	16Mb	96Mb	2Mb	15-inch	2Gb	8x	256K	2 PCI	Ethernet	7.5.5	£1,594
All themed PowerMacs (Family Mac [coded FM here], Home Office [HO], Creative Studio [CS]) come with the following software: *Acrobat Reader, Apple Internet Connection Kit, Best of European Soccer, ClarisWorks, Descent, Full Throttle, Grolier Multimedia Encyclopedia, Lion King Activity Centre, Pocahontas Storybook, Power Pete, Sammy's Science House, Screen Scenes: The Hunchback of Notre Dame, Thinkin' Things 3, Ultimate Human Body*														
PowerMac 5400/180 (FM)	PPC 603e	180MHz	No	16Mb	136Mb	1Mb	15-inch	2Gb	8x	None	1 PCI	Modem	7.5.5	£1,290
PowerMac 5500/225 (FM)	PPC 603e	225MHz	No	32Mb	128Mb	2Mb	15-inch	2Gb	12x	256K	1 PCI	Modem	7.5.5	£1,935
Extras: 2D and 3D accelerators, TV tuner and FM radio card • **Software:** *Actua Soccer, Kai's Power Goo*														
PowerMac 6400/200 (HO)	PPC 603e	200MHz	No	16Mb	136Mb	1Mb	15-inch	2.4Gb	8x	256K	2 PCI	Modem	7.5.5	£1,582
Software: *ClarisImpact, Claris Organizer*														
PowerMac 6500/250 (HO)	PPC 603e	250MHz	No	32Mb	128Mb	2Mb	15-inch	3Gb	12x	256K	2 PCI	Modem	7.5.5	£2,053
Extras: 2D and 3D accelerators • **Software:** *Actua Soccer, ClarisImpact, Claris Organizer, Kai's Power Goo*														
PowerMac 6500/275 (CS)	PPC 603e	275MHz	No	24Mb	128Mb	2Mb	15-inch	4Gb	12x	256K	2 PCI	Modem	7.5.5	£2,663
Extras: 2D and 3D accelerators, TV tuner and FM radio card, Avid video card • **Software:** *3D World, Actua Soccer, Avid Cinema, Cubasis AV, Dabbler, Kai's Power Goo, PageMill, PhotoDeluxe*														
Both PowerMac 7300s come with the following software: *Apple Internet Connection Kit, Microsoft Office*														
PowerMac 7300/166	PPC 604e	166MHz	Yes	16Mb	512Mb	2Mb	Extra	2Gb	12x	256K	3 PCI	Ethernet	7.5.5	£2,067
PowerMac 7300/200	PPC 604e	200MHz	Yes	32Mb	512Mb	2Mb	Extra	2Gb	12x	256K	3 PCI	Ethernet	7.5.5	£2,483
PowerMac 8600/200	PPC 604e	200MHz	Yes	32Mb	512Mb	2Mb	Extra	2Gb	12x	256K	3 PCI	Ethernet	7.5.5	£2,691
Extras: Zip Drive • **Software:** *Apple Internet Connection Kit*														
Both PowerMac 9600s come with an IMS graphics card and *Apple Internet Connection Kit*														
PowerMac 9600/233	PPC 604e	233MHz	Yes	32Mb	768Mb	4Mb	Extra	4Gb	12x	512K	6 PCI	Ethernet	7.5.5	£3,521
PowerMac 9600/200 MP	2 x PPC 604e	200MHz	Yes	32Mb	768Mb	4Mb	Extra	4Gb	12x	512K	6 PCI	Ethernet	7.5.5	£3,925
PowerMac Web Authoring Solution	PPC 604e	200MHz	Yes	32Mb	768Mb	2Mb	Extra	2Gb	12x	256K	3 PCI	Ethernet	7.5.5	£3,619
Extras: Zip Drive, PAL/NTSC/S-Video video ports • **Software:** *BBEdit, Claris HomePage, ColorWeb, Debabelizer Toolbox, Director, Discovering Programming with Java, GraphicConverter, HexWeb, Movie Cleaner Pro, Netscape Navigator, Painter, Shockwave, SoundEdit Pro 16, Specular 3D Workshop, Strata Videoshop, WebBurst, WebMotion*														

Computer Warehouse

MCM: 0171 724 4104	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
Paris	PPC 604e	200MHz	No	16Mb	160Mb	2Mb	Extra	1.2Gb	16x	256K	3 PCI	None fitted	7.6	£1,526
New York	PPC 604e	200MHz	No	48Mb	160Mb	2Mb	Extra	2.1Gb	16x	256K	3 PCI	None fitted	7.6	£1,761
Software: *CAT, ClarisWorks*														
Manhattan	PPC 604e	200MHz	No	80Mb	160Mb	2Mb	Extra	4.3Gb	16x	256K	5 PCI	None fitted	7.6	£1,996
Software: *FreeHand Graphic Studio, mTropolis*														
Hollywood	PPC 604e	200MHz	No	64Mb	160Mb	2Mb	Extra	3.8Gb	16x	256K	5 PCI	None fitted	7.6	£2,349
Extras: Miro DC-20 video card, Zip Drive • **Software:** *mTropolis, Premiere LE*														

What to look out for

CPU: what type of processor is fitted? All Macs now use a PowerPC chip.

Speed: what's the clock speed?

CPU upgrade: is the processor mounted on a daughterboard, so that you can upgrade it later?

Dabs

Dabs Direct: 0800 680000	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
Picasso 160	PPC 604e	160MHz	Yes	16Mb	160Mb	2Mb	Extra	2.1Mb	16x	256K	3 PCI	None fitted	7.6	TBA
Picasso Master 160	PPC 604e	160MHz	Yes	32Mb	160Mb	4Mb	Extra	2.5Mb	16x	256K	3 PCI	None fitted	7.6	TBA
Picasso 200	PPC 604e	200MHz	Yes	32Mb	160Mb	2Mb	Extra	2.5Mb	16x	256K	3 PCI	None fitted	7.6	TBA
Picasso Master 200	PPC 604e	200MHz	Yes	64Mb	160Mb	4Mb	Extra	3.8Mb	16x	256K	3 PCI	None fitted	7.6	TBA

DayStar

CU: 0181 357 5857	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
Both DayStar systems come with multiple-processor software extensions														
Genesis MP720+	4 x PPC 604e	180MHz	Yes	0Mb	1.5Gb	None	Extra	0Mb	8x	512K	6 PCI	Ethernet	7.6	£8,224
Genesis MP800+	4 x PPC 604e	200MHz	Yes	0Mb	1.5Gb	None	Extra	0Mb	8x	512K	6 PCI	Ethernet	7.6	£9,399

Motorola

Principal: 01756 704040	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
StarMax 3180 Desktop	PPC 603e	180MHz	No	16Mb	160Mb	1Mb	Extra	1.2Gb	8x	256K	3 PCI	Modem	7.6	£939
StarMax 3180 MiniTower	PPC 603e	180MHz	No	32Mb	160Mb	1Mb	Extra	2.5Gb	8x	256K	5 PCI	Modem	7.6	£1,056
StarMax 3200 Desktop	PPC 603e	200MHz	No	16Mb	160Mb	1Mb	Extra	1.2Gb	8x	256K	3 PCI	None fitted	7.6	£1,291
StarMax 3200 MiniTower	PPC 603e	200MHz	No	32Mb	160Mb	1Mb	Extra	2.5Gb	8x	256K	5 PCI	Modem	7.6	£1,468
StarMax 3240 MiniTower Plus	PPC 603e	240MHz	No	32Mb	160Mb	4Mb	Extra	2.5Gb	8x	512K	5 PCI	Modem	7.6	£1,879
StarMax 4160 Desktop	PPC 604e	160MHz	No	16Mb	160Mb	2Mb	Extra	1.2Gb	8x	512K	3 PCI	Modem	7.6	£1,526
StarMax 4160 MiniTower	PPC 604e	160MHz	No	32Mb	160Mb	2Mb	Extra	2.5Gb	8x	512K	5 PCI	Modem	7.6	£1,761
StarMax 4200 Desktop	PPC 604e	200MHz	No	16Mb	160Mb	2Mb	Extra	1.2Gb	8x	512K	3 PCI	Modem	7.6	£2,173
StarMax 4200 MiniTower	PPC 604e	200MHz	No	32Mb	160Mb	2Mb	Extra	2.5Gb	8x	512K	5 PCI	Ethernet	7.6	£2,290

Power Computing

MCM: 0171 724 4104	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
Power 100 Mini Tower	PPC 601	100MHz	No	16Mb	256Mb	1Mb	None	1Gb	4x	256K	3 NuBus	None fitted	7.5.3	£704
Software: *CD-ROM Toolkit, ClarisWorks, Grolier Multimedia Encyclopedia, Hard Disk Toolkit, Now! Contact, Now! Up-to-Date*														
All PowerBase systems come with a built-in 3D graphics acceleration system based on 2Mb DRAM, plus the following software: *CD-ROM Toolkit, ClarisWorks, Grolier Multimedia Encyclopedia, Hard Disk Toolkit, Now! Contact, Now Up-to-Date, Quicken SE*														
PowerBase 180 Low Profile	PPC 603e	180MHz	Yes	16Mb	160Mb	Acc	Extra	1.2Gb	8x	256K	3 PCI	None fitted	7.5.3	£1,174
PowerBase 200 Low Profile	PPC 603e	200MHz	Yes	16Mb	160Mb	Acc	Extra	1.2Gb	8x	256K	3 PCI	None fitted	7.5.3	£1,291
PowerBase 240 Mini Tower	PPC 603e	240MHz	Yes	16Mb	160Mb	Acc	Extra	1.2Gb	8x	256K	3 PCI	None fitted	7.5.3	£1,526
All PowerCenter systems come with the following software: *CD-ROM Toolkit, ClarisWorks, Grolier Multimedia Encyclopedia, Hard Disk Toolkit, Now! Contact, Now! Up-to-Date, Quicken SE*														
PowerCenter 150 Low Profile	PPC 604	150MHz	Yes	16Mb	256Mb	1Mb	Extra	2Gb	8x	512K	3 PCI	None fitted	7.5.3	£1,291
PowerCenter 150 Mini Tower	PPC 604	150MHz	Yes	16Mb	256Mb	1Mb	Extra	2Gb	8x	512K	3 PCI	None fitted	7.5.3	£1,585
PowerCenter 180 Mini Tower	PPC 604	180MHz	Yes	16Mb	512Mb	1Mb	Extra	2Gb	8x	512K	3 PCI	None fitted	7.5.3	£1,879
PowerCenter Pro 210 Low Profile	PPC 604e	210MHz	Yes	16Mb	512Mb	2Mb	Extra	2Gb	16x	1Mb	3 PCI	Ethernet	7.6	£2,114
Extras: ATI 3D RAGE acceleration card														
All PowerTower Pro systems come with the following software: *Animals, CD-ROM Toolkit, ClarisWorks, Grolier Multimedia Encyclopedia, Hard Disk Toolkit, Now! Contact, Now! Up-to-Date, Now Utilities, Speed Doubler, US Atlas, World Atlas*														
PowerTower Pro 200 Lite	PPC 604e	200MHz	Yes	16Mb	1Gb	2Mb	Extra	2Gb	8x	1Mb	6 PCI	None fitted	7.5.3	£2,462
Extras: ATI graphics card														
PowerTower Pro 225 Lite	PPC 604e	225MHz	Yes	16Mb	1Gb	2Mb	Extra	2Gb	8x	1Mb	6 PCI	None fitted	7.5.3	£2,579
Extras: ATI graphics card														
PowerTower Pro 225	PPC 604e	225MHz	Yes	32Mb	1Gb	Card	Extra	2Gb	8x	1Mb	6 PCI	None fitted	7.5.3	£2,814
Extras: IMS Twin Turbo graphics card														
PowerTower Pro 225 MP	2 x PPC 604e	225MHz	Yes	32Mb	1Gb	Card	Extra	2Gb	8x	1Mb	6 PCI	None fitted	7.5.3	£4,107
Extras: IMS Twin Turbo graphics card														

RAM: how much RAM is installed?

Max RAM: ... and how much could you install in total?

Video RAM: how much extra RAM is devoted to displaying the screen image? Look out for graphics cards.

Monitor: is a monitor included in the machine's price?

HD: how big is the hard drive?

CD-ROM: is there a CD-ROM drive? If so, what speed is it?

Cache: is there a Level 2 cache for extra speed, and what size is it?

Expansion: what are the main expansion slots and how many are there? Choose between PCI (the most common by far now), NuBus, PDS, and PC Card for PowerBooks.

Comms: many Macs will include a built-in modem, while some business Macs will offer Ethernet for fast networking.

Mac OS: what version of the Mac OS is included?

Price: the estimated street price including VAT. Check the adverts in this issue for the best prices.

Mac Facts continued

Umax

IMC: 01344 871344	CPU	Speed	CPU upgrade	RAM	Max RAM	Video RAM	Monitor	HD	CD-ROM	Cache	Expansion	Comms	Mac OS	Price
All Apus systems (except where noted) come with the following software: *CD-ROM Toolkit, ClarisWorks, FreeHand Graphics Studio, Hard Disk Toolkit, Internet Explorer, Internet Ready CD, Netscape Navigator, TechTool Pro*														
Apus 2000/160	PPC 603e	160MHz	Yes	16Mb	144Mb	1Mb	Extra	1.2Gb	8x	None	2 PCI	None fitted	7.6.1	**£699**
Excludes *FreeHand Graphics Studio*														
Apus 2000/160	PPC 603e	160MHz	Yes	16Mb	144Mb	1Mb	Extra	1.2Gb	8x	None	2 PCI	Ethernet	7.6.1	**£764**
Excludes *FreeHand Graphics Studio*														
Apus 2000AV	PPC 603e	160MHz	Yes	32Mb	144Mb	1Mb	Extra	1.2Gb	8x	None	2 PCI	Modem	7.6.1	**£998**
Extras: ATI Xclaim VR graphics card, video input and output														
Apus 3000/200	PPC 603e	200MHz	Yes	16Mb	144Mb	1Mb	Extra	2.1Gb	8x	256K	3 PCI	None fitted	7.6.1	**£1,204**
Apus 3000 Plus	PPC 603e	200MHz	Yes	16Mb	144Mb	1Mb	Extra	2.1Gb	8x	256K	3 PCI	Ethernet	7.6.1	**£1,340**
Extras: ATI Xclaim 3D graphics card														
Apus 3000/240	PPC 603e	240MHz	Yes	16Mb	144Mb	1Mb	Extra	2.1Gb	8x	256K	3 PCI	Ethernet	7.6.1	**£1,528**
Apus 3000/240AV	PPC 603e	240MHz	Yes	16Mb	144Mb	1Mb	Extra	2.1Gb	8x	256K	3 PCI	Ethernet	7.6.1	**£1,733**
Extras: ATI Xclaim VR graphics card, video input and output														
Apus Movie Maker	PPC 603e	200MHz	Yes	32Mb	144Mb	1Mb	15-inch	2.1Gb	8x	256K	3 PCI	Modem	7.6.1	**£2,139**
Extras: ATI Xclaim 3D graphics card, Miro video card, Umax scanner • **Software:** *Photoshop LE, Premiere LE*														
Apus Multimedia Studio	PPC 603e	200MHz	Yes	32Mb	144Mb	1Mb	15-inch	2.1Gb	8x	256K	3 PCI	Modem	7.6.1	**£2,673**
Extras: ATI Xclaim VR graphics card, video input and output, 6x CD-recordable drive, Umax scanner • **Software:** *Director Multimedia Studio, Photoshop LE, Toast Pro*														
Aegis 200	PPC 604e	200MHz	Yes	32Mb	1Gb	4Mb	Extra	2.5Gb	12x	512K	3 PCI	None fitted	7.6.1	**£1,757**
Software: *CD-ROM Toolkit, ClarisWorks, FreeHand Graphics Studio, Hard Disk Toolkit, Internet Ready CD, Microsoft Internet Explorer, Netscape Navigator, TechTool Pro*														
All Pulsars come with an ATI Xclaim 3D graphics card and the following software: *CD-ROM Toolkit, ClarisWorks, FreeHand Graphics Studio, Hard Disk Toolkit, Internet Ready CD, Microsoft Internet Explorer, Netscape Navigator*														
Pulsar 200AV	PPC 604e	200MHz	Yes	32Mb	1Gb	Card	Extra	2Gb	8x	512K	6 PCI	Ethernet	7.6.1	**£2,456**
Extras: ATI Xclaim VR graphics card, video input and output														
Pulsar 225	PPC 604e	225MHz	Yes	32Mb	1Gb	Card	Extra	2Gb	8x	512K	6 PCI	Ethernet	7.6.1	**£2,673**
Pulsar 233	PPC 604e	233MHz	Yes	32Mb	1Gb	Card	Extra	4Gb	8x	512K	6 PCI	Ethernet	7.6.1	**£2,926**
Super Pulsar 250	PPC 604e	250MHz	Yes	32Mb	1Gb	Card	Extra	4Gb	12x	512K	6 PCI	Ethernet	7.6.1	**£3,666**
Pulsar 200 DP	2 x PPC 604e	200MHz	Yes	32Mb	1Gb	Card	Extra	2Gb	8x	512K	6 PCI	Ethernet	7.6.1	**£3,408**

Mac Facts: no longer available

These Macs are no longer part of their respective companies' ranges, but you'll still find many models quite easily – see the mail order adverts this issue for recently-discontinued Macs, and browse through our Reader Ads (page 139) for bargains across the Mac generations. You can also use this chart to see if a program we've reviewed this issue will work on a Mac you own.

Model	CPU	Speed	RAM	Max RAM	Expansion	FPU	Mac OS
Apple Compact Macs							
Mac 128K	68000	8MHz	128K	not exp	None	No	*≤7.0?*
Mac 512K	68000	8MHz	512K	not exp	None	No	*≤7.0?*
Mac Plus	68000	8MHz	1Mb	4Mb	None	No	*≤7.5.5*
Mac SE	68000	8MHz	1Mb	4Mb	1 PDS	No	*≤7.5.5*
Mac Classic	68000	8MHz	1Mb	4Mb	None	No	*≤7.5.5*
Mac SE/30	68030	16MHz	1Mb	128Mb	1 PDS	Yes	*≤7.6*
Classic II	68030	16MHz	2Mb	10Mb	None	Optional	*≤7.6*
Color Classic	68030	16MHz	2Mb	10Mb	1 LC-PDS	Optional	*≤7.6*

Model	CPU	Speed	RAM	Max RAM	Expansion	FPU	Mac OS
PowerMac 8100/100	PPC 601	100MHz	8Mb	264Mb	3 NuBus, 1 PDS	Yes	*≤7.6*
PowerMac 8100/110	PPC 601	110MHz	8Mb	264Mb	3 NuBus, 1 PDS	Yes	*≤7.6*
PowerMac 8200/120	PPC 601	120MHz	16Mb	256Mb	3 PCI	Yes	*≤7.6*
PowerMac 8500/120	PPC 604	120MHz	16Mb	512Mb	3 PCI, 1 PD	Yes	*≤7.6*
PowerMac 9500/120	PPC 604	120MHz	16Mb	768Mb	6 PCI, 1 PD	Yes	*≤7.6*
PowerMac 9500/132	PPC 604	132MHz	16Mb	768Mb	6 PCI, 1 PD	Yes	*≤7.6*
PowerMac 7600/132	PPC 604e	132MHz	16Mb	512Mb	3 PCI	Yes	*≤7.6*
PowerMac 8500/180	PPC 604e	180MHz	16Mb	512Mb	3 PCI	Yes	*≤7.6*
PowerMac 9500/200	PPC 604e	200MHz	32Mb	768Mb	6 PCI	Yes	*≤7.6*
PowerMac 9500/180 MP	2 x PPC 604e	180MHz	32Mb	768Mb	6 PCI	Yes	*≤7.6*

What to look out for

If you don't own a current Mac, our table will help you check whether a program we've reviewed this issue will work on your particular model.

Model	CPU	Speed	RAM	Max RAM	Expansion	FPU	Mac OS
Apple Mac II Series							
Mac II	68020	16MHz	1Mb	68Mb	6 NuBus	Yes	≤7.5.5
Mac IIx	68030	16MHz	1Mb	128Mb	6 NuBus	Yes	≤7.6
Mac IIcx	68030	16MHz	1Mb	128Mb	3 NuBus	Yes	≤7.6
Mac IIvi	68030	16MHz	4Mb	68Mb	3 NuBus	Optional	≤7.6
Mac IIsi	68030	20MHz	1Mb	65Mb	1 NuBus/PDS	Optional	≤7.6
Mac IIci	68030	25MHz	1Mb	128Mb	3 NuBus	Yes	≤7.6
Mac IIvx	68030	32MHz	4Mb	68Mb	3 NuBus	Yes	≤7.6
Mac IIfx	68030	40MHz	1Mb	128Mb	6 NuBus, 1 PDS	Yes	≤7.6
Apple LCs							
Mac LC	68020	16MHz	2Mb	10Mb	1 LC-PDS	Optional	≤7.5.5
Mac LC II	68030	16MHz	4Mb	10Mb	1 LC-PDS	Upgrade	≤7.6
Mac LC III	68030	25MHz	4Mb	36Mb	1 LC-PDS	Optional	≤7.6
Apple Centris series							
Centris 610	68LC040	20MHz	4Mb	68Mb	1 NuBus/PDS	Upgrade	≤7.6
Centris 650	68040	25MHz	4Mb	136Mb	3 NuBus, 1 PDS	Yes	≤7.6
Apple Performas (non-PowerPC)							
Performa 200	68030	16MHz	2Mb	10Mb	None	Optional	≤7.6
Performa 400	68030	16MHz	4Mb	10Mb	1 LC-PDS	Upgrade	≤7.6
Performa 450	68030	25MHz	4Mb	36Mb	1 LC-PDS	Optional	≤7.6
Performa 475 (= LC475)	68LC040	25MHz	4Mb	36Mb	1 LC-PDS	Upgrade	≤7.6
Performa 600	68030	32MHz	4Mb	68Mb	3 NuBus	Optional	≤7.6
Performa 630 (= LC630)	68LC040	33MHz	4Mb	36Mb	1 LC-PDS	Upgrade	≤7.6
Apple Quadra series							
Quadra 610	68040	25MHz	4Mb	68Mb	1 NuBus/PDS	Yes	≤7.6
Quadra 660AV	68040	25MHz	8Mb	68Mb	1 NuBus/PDS	Yes	≤7.6
Quadra 700	68040	25MHz	4Mb	64Mb	2 NuBus, 1 PDS	Yes	≤7.6
Quadra 900	68040	25MHz	4Mb	256Mb	5 NuBus, 1 PDS	Yes	≤7.6
Quadra 650	68040	33MHz	4Mb	136Mb	3 NuBus, 1 PDS	Yes	≤7.6
Quadra 800	68040	33MHz	8Mb	146Mb	3 NuBus, 1 PDS	Yes	≤7.6
Quadra 950	68040	33MHz	8Mb	256Mb	5 NuBus, 1 PDS	Yes	≤7.6
Quadra 840AV	68040	40MHz	8Mb	128Mb	3 NuBus	Yes	≤7.6
Apple PowerPC Performas							
Performa 5200	PPC 603	75MHz	8Mb	64Mb	1 PDS	Yes	≤7.6
Performa 5260/100	PPC 603e	100MHz	12Mb	64Mb	1 PDS	Yes	≤7.6
Performa 5260/120	PPC 603e	120MHz	12Mb	64Mb	1 PDS	Yes	≤7.6
Performa 5300	PPC 603e	100MHz	8Mb	64Mb	1 PDS	Yes	≤7.6
Performa 5400/160	PPC 603e	160MHz	16Mb	136Mb	1 PDS	Yes	≤7.6
Performa 6200	PPC 603e	75MHz	8Mb	64Mb	1 PDS	Yes	≤7.6
Performa 6400/180	PPC 603e	180MHz	16Mb	136Mb	1 PCI	Yes	≤7.6
Performa 6400/200	PPC 603e	200MHz	16Mb	136Mb	1 PCI	Yes	≤7.6
Apple Power Macintoshes							
PowerMac 6100/60	PPC 601	60MHz	8Mb	72Mb	1 NuBus/PDS	Yes	≤7.6
PowerMac 6100/66	PPC 601	66MHz	8Mb	72Mb	1 NuBus/PDS	Yes	≤7.6
PowerMac 7100/66	PPC 601	66MHz	8Mb	136Mb	3 NuBus, 1 PDS	Yes	≤7.6
PowerMac 7200/75	PPC 601	75MHz	16Mb	256Mb	3 PCI	Yes	≤7.6
PowerMac 7100/80	PPC 601	80MHz	8Mb	136Mb	3 NuBus, 1 PDS	Yes	≤7.6
PowerMac 8100/80	PPC 601	80MHz	8Mb	264Mb	3 NuBus, 1 PDS	Yes	≤7.6
PowerMac 7200/90	PPC 601	90MHz	16Mb	256Mb	3 PCI	Yes	≤7.6
PowerMac 7500/100	PPC 601	100MHz	16Mb	512Mb	3 PCI, 1 PD	Yes	≤7.6

Model	CPU	Speed	RAM	Max RAM	Expansion	FPU	Mac OS
DayStar Mac-compatibles							
Genesis MP600	4 x PPC 604e	150MHz	0Mb	1.5Gb	6 PCI	Yes	≤7.6
Motorola Mac-compatibles							
StarMax 3160	PPC 603e	160MHz	16Mb	160Mb	3 PCI,	Yes	≤7.5.5
Power Computing Mac-compatibles							
PowerCenter 120	PPC 604	120MHz	16Mb	256Mb	3 PCI	Yes	≤7.6
PowerCenter 132	PPC 604	132MHz	16Mb	256Mb	3 PCI	Yes	≤7.6
PowerWave 150	PPC 604	150MHz	16Mb	512Mb	6 PCI	Yes	≤7.6
PowerCenter 166	PPC 604	166MHz	16Mb	512Mb	3 PCI	Yes	≤7.6
PowerTower 200	PPC 604	200MHz	16Mb	512Mb	3 PCI	Yes	≤7.6
Umax Mac-compatibles							
Pulsar 150	PPC 604	150MHz	16Mb	1Gb	6 PCI	Yes	≤7.6
Pulsar 166	PPC 604e	166MHz	16Mb	1Gb	6 PCI	Yes	≤7.6
Apple Portables							
Macintosh Portable	68000	16MHz	2Mb	9Mb	Modem slot	No	≤7.5.5
PowerBook 100	68000	16MHz	4Mb	8Mb	Modem slot	No	≤7.5.5
PowerBook 140	68030	16MHz	4Mb	8Mb	Modem slot	No	≤7.6
PowerBook 170	68030	25MHz	4Mb	8Mb	Modem slot	Yes	≤7.6
PowerBook 145	68030	25MHz	4Mb	8Mb	Modem slot	No	≤7.6
PowerBook 145b	68030	25MHz	4Mb	8Mb	Modem slot	No	≤7.6
PowerBook 160	68030	25MHz	4Mb	14Mb	Modem slot	No	≤7.6
PowerBook 150	68030	33MHz	4Mb	40Mb	Modem slot	No	≤7.6
PowerBook 165c	68030	33MHz	4Mb	14Mb	Modem slot	No	≤7.6
PowerBook 180	68030	33MHz	4Mb	14Mb	Modem slot	Yes	≤7.6
PowerBook 180c	68030	33MHz	4Mb	14Mb	Modem slot	Yes	≤7.6
PowerBook 165	68030	33MHz	4Mb	14Mb	Modem slot	No	≤7.6
PowerBook 520	68LC040	25MHz	4Mb	36Mb	Modem slot	Upgrade	≤7.6
PowerBook 520c	68LC040	25MHz	4Mb	36Mb	Modem slot	Upgrade	≤7.6
PowerBook 540	68LC040	33MHz	4Mb	36Mb	Modem slot	No	≤7.6
PowerBook 540c	68LC040	33MHz	4Mb	36Mb	Modem slot	No	≤7.6
PowerBook 190	68LC040	33MHz	8Mb	40Mb	2 PC card	No	≤7.6
PowerBook 190cs	68LC040	33MHz	8Mb	40Mb	2 PC card	No	≤7.6
PowerBook 5300	PPC 603e	100MHz	8Mb	56Mb	2 PC card	Yes	≤7.6
PowerBook 5300c	PPC 603e	100MHz	8Mb	64Mb	2 PC card	Yes	≤7.6
PowerBook 5300ce	PPC 603e	100MHz	8Mb	64Mb	2 PC card	Yes	≤7.6
PowerBook 5300cs	PPC 603e	100MHz	8Mb	64Mb	2 PC card	Yes	≤7.6
Apple Duos							
PowerBook Duo 210	68030	25MHz	4Mb	32Mb	Modem slot	With Dock	≤7.6
PowerBook Duo 230	68030	33MHz	4Mb	32Mb	Modem slot	With Dock	≤7.6
PowerBook Duo 250	68030	33MHz	4Mb	32Mb	Modem slot	With Dock	≤7.6
PowerBook Duo 270c	68030	33MHz	4Mb	32Mb	Modem slot	Yes	≤7.6
PowerBook Duo 280	68LC040	33MHz	4Mb	40Mb	Modem slot	No	≤7.6
PowerBook Duo 280c	68LC040	33MHz	4Mb	40Mb	Modem slot	No	≤7.6
PowerBook Duo 2300c	PPC 603e	100MHz	8Mb	56Mb	Modem slot	Yes	≤7.6
Apple Duo Docking Stations							
PowerBook Duo MiniDock	–	–	–		None	No	N/A
PowerBook Duo Dock	–	–			2 NuBus	Optional	N/A
PowerBook Duo Dock II	–	–			2 NuBus	Yes	N/A
PowerBook Duo Dock Plus	–	–			2 NuBus	No	N/A

CPU: what type of processor is fitted?

Speed: what's the clock speed?

RAM: how much RAM is installed?

Max RAM: ... and how much could you install in total?

Expansion: what are the main expansion slots and how many are there? Choose between PCI (the most common by far now), NuBus, PDS, and PC Cards for PowerBooks.

FPU: the Floating Point Unit speeds up complex maths work like 3D graphics. All PowerPC chips have a built-in FPU.

Mac OS: what is the latest version of the Mac OS your Mac can run? Some older Macs are not capable of running Mac OS 7.6, for example. (Note that you'll still need at least 8Mb of RAM to run the latest Mac OS, even if your processor's up to the job.)

The Lowest prices

Price Promise
We will MATCH or BEAT ANY price!
See details across the page

Best MODEMS

NOW ONLY 33.6 Internal Modem £109 incl VAT £128.08

GLOBAL VILLAGE COMMUNICATION

Teleport 33.6 9 pin	MGV33.6	£109
Teleport 33.6 8 pin	MGV33.6/8	£109

Best Selling SCANNERS

NEW!

FROM AS LOW AS Astra 600S £169 incl VAT £197.40

UMAX

Astra 600S 300X600dpi/30bit/Optional Photoshop	UVS6E	£169
Vista S12E 1200X600dpi/24bit/Optional Photoshop	UVS12E	£325
Powerlook ColourStudio II 1200X600dpi/36bit	UPLCS	£749
Visioneer Paperport	VPPVX	£188

Best Selling SOFTWARE

Insignia SoftWindows 95	SWINSW95	£298
Adobe TypeManager 4	SWADTM4	£38.49
Norton Utilities 3.2	SWNV3.2	£66
Symantec Suitcase 3	SWSYMS3	£47
Retrospect Backup Software	DSR	£188
Corel Draw 6 U/G	SWCODSUP	£81
QuarkXpress 3.32	SWQX32	£628
Symantec Sam 4.5	SWSYMS4.5	£45
Adobe Photoshop 4 U/G	SWADPS4UP	£153
Claris Works 4	SWCLWKS	£288

Best Selling PRINTERS

NOW ONLY DeskJet 870cxi £288 incl VAT £338.40

HP Printers

HEWLETT PACKARD

HP DeskJet 340cxi Col Inkjet	PC2655A	£158
HP DeskJet 870cxi Col Inkjet	PC4555A	£288
HP LaserJet 6MP A4 Laser	PC3982A	£548

Apple Printers

NOW ONLY StyleWriter 1500 £99 incl VAT £116.33

Apple Colour Stylewriter 1500	PM4428B/A	£99
Apple Colour Stylewriter 2500	PM4236B/A	£149
Apple Laserwriter 4/600PS	PM3920B/A	£568
Apple Laserwriter 16/600PS	PM3342B/A	£1388

Best Selling MONITORS

FROM AS LOW AS Dia. Scan 15HX £248 incl VAT £291.40

MITSUBISHI ELECTRIC

Mitsubishi Monitors

Diamond Scan 15HX 15in/1024x768/FST	VMIT15HX	£248
Diamond Pro 17HX 17in/1280x1024/FST	VMIT17HX	£419
Diamond Pro 67TXV 17in/1280x1024/Diamondtron	VMIT67TXV	£408
Diamond Pro 87TXM 17in/1280x1024/Diamondtron	VMIT87TXM	£474
Diamond Pro 91TXM 21in/1600x1280/Diamondtron	VMIT91TXM	£988

Formac Monitors & Cards

Provision 2/40 4Mb VRAM/1152x870@80Hz	VPNGA30-2	£188
Provision 4/80 8Mb VRAM/1920x1080@72Hz	VPNGA40-2	£359
ProNitron F17 17in/1280x102@70Hz	VPN1787-1	£338
ProNitron 17/400 17in/1280x1024@75Hz	VPN1785-1	£448

NOW ONLY ProNitron 17/400 £448 incl VAT £561.65

Formac UK

Apple Monitors

NOW ONLY Multiscan 1710 £498 incl VAT £585.15

Multiscan 1710 Trinitron 17in/1280x1024@75Hz	VM4588B/A	£498
Multiscan 1710AV Trinitrion 17in/1600x1280@75Hz	VM4589B/A	£548

Best Selling POWERBOOK

Powerbook 1400cs/117 12/750/11.3" Dual Scan	CM5287B/A	£994
Powerbook 1400c/133 16/1Gb/CD/L2/11.3" Active	CM5576B/A	£1998
Powerbook 3400c/180 16/1.3Gb/256k/12.1" Active	CM4596B/A	£2649
Powerbook 3400c/180 16/1.3Gb/CD	CM4598B/A	£2949
Powerbook 3400c/200 32/2Gb/CD/L2/Enet/12.1" Active	CM6146B/A	£3448
Powerbook 3400c/240 16/3Gb/CD	CM5828B/A	£3984

FROM AS LOW AS PB 3400C/180 £2649 incl VAT £3112.58

Best Selling MOTOROLA

MOTOROLA

FREE Zip Drive with selected items Call our Sales Team today!

FROM AS LOW AS StarMax 3180 DeskTop £799 incl VAT £938.80

StarMax 3180 DeskTop 603e, 180MHz, 16/1.2/CD	CCMOT101	£799
StarMax 3180 MiniTower 603e, 180MHz, 32/12.5/CD	CCMOT102	£899
StarMax 4160 DeskTop 604e, 160MHz, 16/1.2/CD	CCMOT401	£1295
StarMax 4160 MiniTower 604e, 160MHz, 32/2.5/CD	CCMOT402	£1499

performance direct

LOWEST PRICES · FRIENDLY PEOPLE · HUGE STOCKS · SAME DAY SHIPMENT · FREE TECH SUPPORT · FULL WARRANTIES

on any Mac product!

To receive a FREE catalogue, please complete and return to Performance Direct, FREEPOST, Egham, Surrey TW20 9BR

Name
Company
Address
Telephone
Post Code
Fax

Call today on 01784 477477!

Tick if you do not wish to receive mailings from other companies!

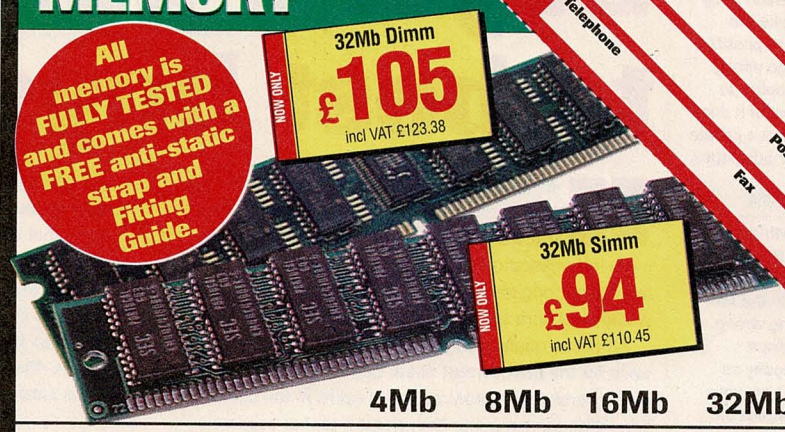
MACF08

Best Selling DRIVES

Iomega 100Mb Zip Drive	D100ZIP	
External 100Mb Zip Drive	**£89**	
Iomega 1Gb Jaz Drive	D1GJAZIE	
External 100Mb Jaz Drive	**£298**	
2 Gb Quantum AV Int	D2GQI	
2Gb Internal Drive	**£184**	
2 Gb Quantum AV Ext	D2GQE	
2Gb External Drive	**£234**	
3.2 Gb Quantum AV Int	D3.2GQI	
3.2Gb Internal Drive	**£228**	
3.2 Gb Quantum AV Ext	D3.2GQE	
3.2Gb External Drive	**£288**	
4-16Gb DAT Drive	DAT4E	
DAT Drive	**£569**	
Panasonic 8 Speed CD	DCD8PAE	
8 speed SCSI CD ROM External	**£95**	
Formac 6xCD Writer	DCDR46EF	
6 Speed CD Writer	**£448**	
Verbatim 640Mb OptiDriver	OF640E	
External 640Mb Drive	**£324**	

Best Selling MEMORY

All memory is FULLY TESTED and comes with a FREE anti-static strap and Fitting Guide.



	4Mb	8Mb	16Mb	32Mb	64Mb
30 Pin Simms Mac II, LC, LCII, Q700, Q900	**£29** S487	-	**£79** S168	-	-
72 Pin Simms 475, Q600, Q630, Q660AV, PM6100, 7100, 8100	**£15** S1327	**£26** S23272	**£48** S43272	**£94** S83272	-
168 Pin Dimms PM7200, 7500, 7600, 7300, 8200, 8500, 8600, 9500, 9600, Umax Pulsar	-	**£32** S1646G	**£57** S2646G	**£105** S4646G	**£194** S8646G
168 Pin EDO Dimms PM4000,Motorola Starmax	-	**£35** S1646E	**£64** S2646E	**£125** S4646E	**£239** S8646E

Best Selling POWERMACS

PowerMac 4400/200 16/1.2Gb/8xCD	CM5766BA **£868**
PowerMac 4400/200+ 16/2Gb/8xCD/L2/ENet	CM5842B/A **£998**
PowerMac 5500/225 32/2.0Gb/12xCD	CM5623B/A **£1498**
PowerMac 7300/166 16/2Gb/12xCD/L2/Enet	CM5542B/A **£1498**
PowerMac 8600/200 32/2Gb/12xCD/L2/Enet	CM5453B/A **£2098**
PowerMac 9600/200 32/2Gb/12xCD/L2/Enet	CM5456B/A **£2458**

Best Selling UMAX

UMAX

Apus 2000/160 16/1.2Gb/8xCD	CAPUS2000/160 **£613**
Apus 3000/200 16/2Gb/8xCD/L2	CAPUS3000/200 **£1025**
Pulsar 200 AV 200Mhz/32/2Gb/8xCD/L2/Enet	CUMAX200AV **£2175**
Pulsar 200 DP 2x200Mhz/32/2Gb/8xCD/L2/Enet	CUMAX200DP **£2900**
Pulsar 225 16/2Gb/8xCD/L2/Enet	CUMAX225 **£2500**

Best Selling MEDIA

Verbatim CDR ONLY £2.75 each when you buy 50!

Verbatim Datalife + CDR DatalifePlus 74min	M91224 **£3.99**
Verbatim 230Mb Opt Disk 3.5" Optical Disk (Mac Format)	M90672 **£6.99**
Verbatim 230Mb Opt Disk 3.5" Optical Disk	M90545 **£7.49**
Verbatim 90m DAT Tape 4mm 90m DAT Tape	M88195 **£4.49**
Verbatim 120m DAT Tape 4mm 120m DAT Tape	M89547 **£12.49**
100Mb Zip Disk Iomega 100Mb Zip Disk	D100ZIPCART **£8.83**
1Gb Iomega Jaz Cart 1Gb Jaz Disk	D1JAZCART **£59.00**
88Mb Syquest Cartridge 5.25" 88Mb Syquest	MSQY88 **£29.99**

*Our Price Promise

We constantly monitor competitors prices to make sure that we can offer you the best value for money deals around. Our Price Promise policy is to match or beat competitors prices for any product we stock. This is provided the product is new and is the same model, specification and version, is supported to the same post-sale levels we offer, is in stock, has the same warranty and is available from the competitor on the same day of purchase. In some cases where margins are particularly tight we may require to see a written quotation from the other party. Unfortunately, the price promise is not applicable to sales where manufacturer backed Corporate or Educational discounts are quoted.

To Order Call 01784 477477

Opening Hours
Mon - Fri: 9am - 6pm
Saturday: 9.30pm - 1pm

A 24hrs answering service operates outside these hours.

NO credit card surcharges

All prices are for business users and exclude VAT. Next Day delivery from £9 or 48 hour delivery from £5.50. Prices and descriptions are correct at time of going to press, but may change. E&OE. All orders are subject to our terms and conditions which are available on request. We may make our mailing list available to other companies, please let us know if you would like to be excluded. © Performance Direct 1997

Please quote code MACF08 when ordering

Buying advice

Whether you're buying in person or by mail order, here's how to make the transaction go as smoothly as possible, and put things right if they go wrong. Note that everything here applies to buying from a business; most of it does *not* apply if you're buying from a private seller in MACFORMAT's reader ads pages.

How to protect yourself

If you are buying goods worth more than £100 in total, use a credit card if possible, for the whole or even just a part of the price. That way, in the unlikely event of anything going wrong, you'll be legally entitled to claim against the credit card company as well as the seller. (You won't get your money back twice, of course, but the credit card company is likely to be there to claim against, even if the seller has gone bust.) You might also get extra insurance for your purchase – check with your credit card company.

If you don't have a credit card, pay by cheque or postal order (ask at your post office). Never send cash through the mail, even by registered mail. Apart from any risk of theft, you can't stop payment if you need to, and even if you have proof of posting, it is impossible to prove how much you sent.

Keep records. If you're paying by credit card over the phone, keep a note of the exact time of the order and the name of the person who took it, and ask for an order number. If you're paying by cheque, make sure you fill in the details of the date, amount and payee's exact name on the stub – and keep it somewhere safe! Always keep all receipts, and make notes of all correspondence by mail or phone.

Other sensible precautions

- Shop around for the best price and check what is included. Packing and delivery? Any necessary cables? VAT? By law, an advert must say *explicitly* if VAT is *not* included; if it doesn't, VAT *is* included. But this can be in the small print, so do check.
- If you're buying by mail, ring first to confirm price and availability. Explain what you want the product for and satisfy yourself that you're getting what you need – you can't return something later just because you've changed your mind. Ask what the dealer's policy is should you have problems – few mail-order dealers offer "on-site" service. Find out when you can expect delivery.
- If you're buying in person, check that everything works before you leave the shop. If you've ordered by mail, check the goods carefully when they arrive. If the driver's in a hurry, mark the delivery note "Goods not inspected". If there's any part of the product you're not happy with, don't use it. If you do, you could be deemed to have accepted it.
- Whether you bought it by mail or in a shop, the law says a product must be:

1. "Of satisfactory quality" (that is, broadly speaking, it must work);
2. "As described" (in the advert or in

➤

Buyer's guide to best buys

Here are over 160 of the best Mac buys on the market, based on MACFORMAT's own authoritative, independent product tests. If you want more information on any product, ring the contact listed or refer to our original review – if you need to order an issue you missed, turn to our back issues service on page 142.

All prices quoted include VAT – check the ads in this issue for the best current deals. Where we reviewed an earlier version of a product, this is noted in the comment line. Although we quote the ratings from our original review, the comments about each item are based both on that review *and* how we see the product now. *Word 6* might be just as good now as when we reviewed it in MACFORMAT 20, but the competition has developed.

Note that some details may have changed since we first reviewed these products – hardware in particular is updated and improved regularly. The information in these listings has been thoroughly checked and is correct as we go to press, but prices and specifications can change at any time. Always make enquiries before you buy, to verify that the product you're considering will meet your needs.

MF CLASSIC We give the MACFORMAT Classic award only to products that set the standards for others to follow.

Storage media

What do you do when your hard disk is full to the brim? External storage devices can provide much-needed extra storage capacity or become a portable storehouse for vast quantities of data.

Name	Price	Rating	Reviewed	Contact	Telephone
Electronique d2 640Mb MO	£551	80%	MF48	Electronique d2	0171 833 0009
A respectable 3.5-inch magneto-optical drive, which is let down by its price and documentation.					
Electronique d2 2.6Gb MO	£2,114	83%	MF43	Electronique d2	0171 833 0009
A fast and neat magneto-optical drive, but it's expensive and comes with only basic software and poor documentation.					
Electronique d2 2Gb AV HD	£512	90%	MF43	Electronique d2	0171 833 0009
MF CLASSIC A stylish external hard disk with minimal documentation; basic driver software, but lightning-fast.					
Electronique d2 540 MCD	£288	83%	MF48	Electronique d2	0171 833 0009
One of the faster magnetic cartridge drives around, with full formatting and driver utilities.					
Gasteiner 1Gb HD	£293	90%	MF34	Gasteiner	0181 345 6000
MF CLASSIC A fast, cheap and compact hard drive, but with an extremely noisy fan.					
Iomega Zip Drive	£141	81%	MF48	Iomega	0800 973194
Fast becoming as ubiquitous as the floppy disk drive – cheap and handy, but far from the fastest option available.					
MicroNet Jaz Drive	£469	94%	MF43	MicroNet	01926 470460
MF CLASSIC The successor to the Zip drive uses astonishing 3.5-inch 1Gb cartridges and is fast, portable and cheap.					
Olympus 230Mb PowerMO	£351	91%	MF43	Mac & More	01442 878900
MF CLASSIC A compact 3.5-inch magneto-optical drive that's neat, fast, cheap, and comes with a long-term warranty.					
ONE Tech 2.6 Optical Drive	£1,056	87%	MF51	Disc Direct	01223 507700
A solid magneto-optical drive – good build and performance at a competitive price.					
Performance Direct 2Gb HD	£375	92%	MF43	Performance Direct	01784 477477
MF CLASSIC An inexpensive and functional-looking hard disk which comes with excellent driver software.					
Quantum Fireball 1.2Gb HD	£269	88%	MF34	Performance Direct	01784 477477
A quiet, very fast hard drive with a good-length SCSI cable. We reviewed the Quantum Fireball 1Gb HD.					
Xyratex 5000 2.6Gb MO	£1,409	90%	MF43	Performance Direct	01784 477477
MF CLASSIC Reasonable performance and good value for money from this big slab of a magneto-optical drive.					

Monitors

Not all monitors are the same. How sharp is your picture? Are the colours crisp and true to life? What resolutions are available? Is there any distortion? We've tested both 15-inch and 17-inch models.

Name	Price	Rating	Reviewed	Contact	Telephone
AppleVision 1710	£638	92%	MF40	Apple	0800 127753
MF CLASSIC A 17-inch monitor with easy controls, overscan (no black borders) and superb picture quality.					
Hitachi 17MVX Pro 2	£704	85%	MF40	Hitachi	0800 605605
Good performance even at high resolutions, although setting up the screen could get fiddly and tedious.					
Hitachi 17MVX V2	£551	83%	MF44	Hitachi	0800 605605
Good picture quality and comprehensive controls but disappointing documentation. Impressive for the price.					
Iiyama Pro 17-inch	£735	89%	MF40	Iiyama	01438 745482
The DiamondTron screen provides excellent quality even at the staggering maximum resolution of 1,600 x 1,200.					

Name	Price	Rating	Reviewed	Contact	Telephone
Mitsubishi 17HX	£758	83%	MF40	Mitsubishi	01707 276100
Good quality except at the highest resolution, and comes with an anti-moiré function. The manual could be more helpful.					
Samsung 17GLsi	£822	84%	MF40	Samsung	0800 521652
A 17-inch unit with a maximum resolution of 1,280 x 1,024 and a Trinitron tube. Excellent quality at all resolutions.					
Sony 15sfII	£465	91%	MF40	Sony	0181 760 0500
MF CLASSIC Unusually for a 15-inch monitor, the Sony provides superb picture quality at all resolutions.					
Sony 17sfII	£763	92%	MF40	Sony	0181 760 0500
MF CLASSIC Picture quality is excellent at all resolutions, setting up is easy and the manual is excellent.					
Taxan Ergo Vision 730TCO	£735	84%	MF40	Taxan	01344 484646
This 17-inch monitor offers better picture quality than its 15-inch smaller brother. We reviewed the Ergo Vision 730LR.					
ViewSonic 15GA	£351	83%	MF51	IMC	01344 872800
An impressive multimedia monitor with sound quality – display not as fine as a Trinitron, but excellent value for money.					

Graphics cards

Speed up your Mac's display with an accelerator card. Different models can be set up to add resolution and colours, improve 3D rendering or offer all-round improvements.

Name	Price	Rating	Reviewed	Contact	Telephone
ATI Xclaim GA	£293	79%	MF45	ATI	01235 833666
The Xclaim GA has a good mix of useful features and it's a solid performer, but it would benefit from a price cut.					
Formac ProLegend GA (NuBus)	£622	80%	MF45	Formac	0181 533 4040
This card has a good range of features, but it's not terribly fast. Also, it doesn't support thousands of colours.					
Formac ProVision 4/60	£499	87%	MF45	Formac	0181 533 4040
The ProVision 4/60 has a broad range of features, good documentation and is very fast indeed.					
IMS Twin Turbo 128M2	£352	83%	MF45	Principal	01756 704040
Although slow in real-world tests, we liked this card because of its ease of use and upgradability.					
Matrox MGA Millennium	£234	88%	MF45	Principal	01756 704040
Pretty speedy and great value for money – this card offers not only 128-bit graphics, but also has QuickDraw 3D.					

Digital input

How do you get analogue data from the real world into digital data on your Mac? Here is MACFORMAT's pick of scanners, digital cameras and related software.

Name	Price	Rating	Reviewed	Contact	Telephone
Connectix Colour QuickCam	£199	85%	MF45	Connectix	0171 622 3355
As an unpretentious, low-cost and fun entry to digital still and video images on the desktop, it's difficult to fault.					
Epson GT-5000 scanner	£469	81%	MF41	Epson	01442 61144
This scanner's a little fuzzy but has reasonable colour reproduction. A little lacking in features, with poor documentation.					
Kodak DC-25 camera	£400	80%	MF51	Kodak	0800 281487
It's not cheap but it is digital – and just think of the fun you can have with the supplied *Power Goo* software.					
Microtek Scanmaker E3	£328	86%	MF41	CU	0181 358 5857
At 600dpi, images were a bit fuzzy and lost subtlety, but overall performance is very acceptable for a scanner of this price.					
Nikon Coolpix 100	£516	80%	MF50	Nikon	0800 230220
If you want a simple way to get digital images onto your PowerBook, this digital camera could be the solution.					
Umax Vista S6E scanner	£499	85%	MF41	IMC Distribution	01344 872800
Very fast scanner but with a little fuzziness and difficulty with greens. Otherwise quality was good, given the price.					
Visioneer PaperPort scanner	£293	86%	MF28	CU	0181 358 5857
Tiny A4 mono scanner that can sit between your keyboard and Macintosh – sheets are rolled in and out.					

Printers

Are you shopping for a mono printer or colour? Portable or desktop? PostScript or non-PostScript? Inkjet or laser? We've reviewed dozens of printers for every need, and here is our pick of the best.

Name	Price	Rating	Reviewed	Contact	Telephone
ALPS MD-2010	£529	90%	MF45	Rotec Distribution	01604 402012
MF CLASSIC Slow and clackety though it might seem, the MD-2010 produces quite superb colour and definition.					
Apple LaserWriter 12/640 PS	£1,177	80%	MF47	Apple	0800 127753
A perfectly adequate laser printer – ideal if you feel safest with an Apple badge on your hardware.					
Apple StyleWriter 1500	£189	90%	MF38	Apple	0800 127753
MF CLASSIC For the price, excellent colour performance even on plain paper.					
Apple StyleWriter 2500	£277	84%	MF38	Apple	0800 127753
A big improvement on its predecessor the 2400, but not quite in the same league as colour rivals from HP and Epson.					

Buying advice continued

person – and this criterion applies also if you're buying from a private seller);
3. Fit for the purpose for which it was sold or which you specified.

If it fails to meet any or all of these criteria, you are entitled to return the product for a full refund, get compensation for all or part of the value, or get a replacement or free repair, depending on the seriousness of the defect. These are the "statutory rights" that adverts always say are "not affected" by any extra guarantees. A dealer can't deny these rights or add conditions (such as "provided goods are returned to us at your expense within seven days").

How to complain

If you're not happy about something, contact the supplier first and politely explain your concerns. Be patient; if there's some technical problem, it may genuinely take some time to find a solution. Most difficulties are sorted out at this stage without further fuss.

If yours isn't, put your complaint in writing, clearly stating your problem and what you'd like done. Give the firm a reasonable time to reply – say 14 days or so.

- If your complaint is not resolved, you may need to take some sort of legal action to enforce your rights. This need not cost you a lot of money. Seek advice from a solicitor (ask about the free advice scheme – you may not have to pay for the initial consultation). Or contact one of the following (check in your local phone directory):
- The Citizen's Advice Bureau,
- Trading Standards Office (listed under your local council),
- Office of Fair Trading, or
- County Court (ask about the Small Claims procedure).

Where to buy

- Mail-order companies are ideal if you know what you want and how to set it up, and therefore just want the best price.
- Retailers are a good bet if you need advice and technical assistance, and you want to examine products before you buy them.

There are a several types of retail outlet selling Macintosh products:

- Authorised Apple resellers may not always offer the best price, but you can expect a wide choice of hardware and software, and considerable expertise.
- Major retail chains can be another, sometimes more accessible, source. The Dixons group sells a limited number of models in the Mac range, while Comet and PC World stock hardware and software. Check with your local store before visiting, though – smaller stores may not stock a useful range.
- Entertainment chains like HMV now carry Mac software in some branches.
- Finally, independent retailers may stock Mac products. Check your local Yellow Pages for more information.

➤ page 128

Product news

The art of Adobe

Adobe has released a new version of the 3D rendering tool ***Dimensions 3.0.*** It offers powerful new editing controls similar to those in *Illustrator,* so you can create 3D objects more easily, using tools that are already familiar. Because you can output in either vector or bit-map formats, production-quality 3D modelling is also possible. (Vector images are made up by a series of mathematical commands, enabling you to increase the size of your image without losing any smoothness of line. Bitmap formats create images by specifying the number and position of colours in a grid format. They're particularly useful for reproducing the rich textures of a photograph.)

Adobe has also released ***Streamline 4.0***, a tool to convert bitmap images into line art. *Streamline 4.0* features enhanced control in converting images, enabling you to specify the number of colours you wish to capture. After conversion, editing art is flexible, thanks to four new tools that enable you to adjust curves and lines, and add and delete points. Integration with other Adobe products is apparent too, as both *Dimensions 3.0* and *Streamline 4.0* use the set of standard keyboard shortcuts found in other Adobe programs, plus enhanced drag-and-drop support. Adobe *Dimensions 3.0* and *Streamline 4.0* are expected to cost £112 each, or £77 for an upgrade from previous versions. Contact any authorised reseller, Adobe Direct on 0131 458 6842 or visit Adobe's Web site at **http://www.adobe.com/**

A canny scanner

Umax is launching the **Astra 600-S** scanner as the successor to the popular Vista S6E (MACFORMAT 44, 86%). Offering 30-bit colour quality, the Astra can read millions of colours and has an optical resolution of 300 x 600dpi (dots per inch), which can be enhanced to 4,800 x 4,800dpi with the Astra's *UltraView* software for detailed images. This entry-level scanner has all the necessary features for the professional graphic designer and novice alike. It comes bundled with *VistaScan* and *Presto PageManager* software, which have a host of useful functions such as adjusting image brightness, and a facility that enables you to drag-and-drop scans to your printer, fax or e-mail software.

The *Umax Copy Utility,* another new tool, can copy a document to any specified size. The *Copy Utility* automatically scans the document, performs a MagicMatch colour calibration

➤ page 132

Name	Price	Rating	Reviewed	Contact	Telephone
Epson EPL-5500	£469	89%	MF39	Epson	01442 61144
Compact and light 600dpi PostScript printer with a useful 5Mb of RAM. You'll need to buy a lead for your Mac, though.					
Epson Stylus Pro	£513	90%	MF38	Epson	01442 61144
MF CLASSIC Built like a breeze block, but offers stunning smoothness. Almost as good as a dye-sub printer.					
FotoFUN! Printer	£493	87%	MF31	Bannerbridge	01268 419101
Affordable, good quality dye-sub colour output. Takes up little space but only prints out 6-inch x 4-inch snapshots.					
HP LaserJet 5MP	£1,198	95%	MF29	Hewlett Packard	0990 474747
MF CLASSIC 600dpi PostScript laser printer with excellent greyscale and remarkable output quality at the price.					
HP DeskJet 340	£235	85%	MF27	Hewlett Packard	0990 474747
Portable 300dpi inkjet with colour capability and excellent output quality. We reviewed the HP DeskWriter 320.					
HP 870cxi	£494	92%	MF38	Hewlett Packard	0990 474747
MF CLASSIC First-rate colour balance and very good performance on plain paper. We reviewed the HP 850C.					

Modems

If you want to connect to the Internet, to bulletin boards, on-line services or even friends and acquaintances via your Mac, you need a modem. The faster the modem, the cheaper it will be to run.

Name	Price	Rating	Reviewed	Contact	Telephone
Global Village Teleport 33.6	£163	83%	MF51	Frontline	01256 868008
A fast and neat modem at a reasonable price, but the software bundle could have been more friendly and complete.					
Motorola 3400	£150	90%	MF39	Gasteiner	0181 345 6000
MF CLASSIC Uncomplicated and easy to set up 28.8K modem, but with rather basic fax software.					
SupraExpress 33.6	£175	89%	MF39	CU	0181 357 5857
Plain-looking 33.6K modem powered by your ADB keyboard port. We reviewed the SupraExpress.					
US Robotics Mac & Fax	£199	89%	MF39	US Robotics	0800 225252
The Mac & Fax Sportster is a fast and reliable 28.8K modem, but there's no straight-through port to plug a telephone into.					

Input devices

There are plenty of alternatives to your regular keyboard and mouse, including some for specialised use. Take a look at graphic tablets as well – these enable you to sketch into art packages.

Name	Price	Rating	Reviewed	Contact	Telephone
AlphaSmart Pro Keyboard	£234	86%	MF47	Chromasonic	0181 203 8989
Doubles brilliantly as a portable word processor, but as a keyboard it's let down by spongy key action.					
Apple Adjustable Keyboard	£166	81%	MF47	Apple	0800 127753
A space-age split keyboard which is remarkably comfortable, but bulky and overpriced.					
Apple Design II Mouse	£29	83%	MF47	Apple	0800 127753
Shapely mouse with positive click but a little bulky for smaller hands. It's standard with most PowerMacs and Performas.					
Calcomp DrawingSlate II A6	£116	86%	MF47	Calcomp	01734 320032
Superb value for money – just as well made as Wacom's tablets, with a brilliant range of highly usable features.					
Kensington Thinking Mouse	£54	86%	MF47	Mac Accessory	0191 296 1500
Top of the range. Has four buttons (five when front two are pressed together), all fully programmable.					
MacAlly Single-Button Mouse	£18	87%	MF47	Mac Accessory	0191 296 1500
Great value – the sensitive switch requires a super-light touch so lessens finger fatigue. Easy-maintenance design.					
Wacom ArtPad II	£135	90%	MF47	CU	0181 358 5857
MF CLASSIC The quality of this graphics tablet is superb and the UltraPen Eraser is simply brilliant.					
Wacom UltraPad A4	£410	85%	MF47	CU	0181 358 5857
Very well made indeed, with the excellent UltraPen Eraser or puck. At the street price of nearer £350, a great buy.					

Office software

Many Macs are used in the office or study with worthwhile applications like word processors, databases and spreadsheets. There are many related productivity applications, too, like personal organisers.

Name	Price	Rating	Reviewed	Contact	Telephone
ClarisImpact 2	£152	86%	MF34	Claris	0181 756 0101
Combines spreadsheet functions with charting, outlining and DTP for the ultimate low-end business presentation suite.					
ClarisWorks 4.0	£152	92%	MF31	Claris	0181 756 0101
MF CLASSIC The Mac's standard all-in-one office suite. Inexpensive yet very powerful in the right hands.					
Excel 5	£220	87%	MF18	Microsoft	0345 002000
The only professional spreadsheet package on the Mac boasts 3D documents and more power than a Saturn 5.					
Expresso 1.0	£20	89%	MF31	Softline	0181 401 1234
Personal organiser that makes up for in charm and value what it lacks in high-powered relational data-handling.					

INTERNET
http://www.seven.net/fount/
01242-222308
FONTS
The Universal Fount Co. Ltd.

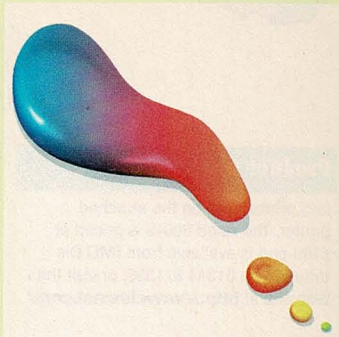
MAC REPAIRS Established 1986
- Free Apple Warranty Service
- Same Day & Next Day On Site
- Fixed Hardware Labour Charges
- In House *Free Estimates*
- While-U-Wait
- Collection & Delivery
- Data Recovery *Free Estimates*
- Component Level Repairs
- Laser Printer Service
- Networking

Apple Authorised Service Provider
1 Parkgate House
Broomhill Road
London SW18 4JQ
Honeylight COMPUTERS LTD
Fax:0181-871 4188 e-mail:enquiries@honeylight.co.uk
0181 871 4187

Computer FirstAid
Mac Repairs
Competitive Prices
We Specialise in Apple Mac's
Repairs • Servicing
Upgrades • Call-Outs
Networks • Training
0171 609 7481

MEGASOFT COMPUTERS LIMITED
18 HILDENS DRIVE, TILEHURST
READING, BERKS, RG31 5HU.
REPAIR TO COMPONENT LEVEL
BUY USED & SURPLUS STOCKS
PART EXCHANGE YOUR OLD MAC FOR A NEW POWER MACINTOSH OR ANY OTHER APPLE PRODUCT
BROKERAGE SERVICE AVAILABLE
SECOND-USER ITEMS FOR SALE
Compact Systems from £100 — LC Series from £199
Mac II Series from £110 — Centris / Quadras from £449
Power Macs from £775 — P'book 100 Series from £235
Duo 200 Series from £469 — P'book 500 Series from £530
Keyboard & Mouse from £65 — Monitors from £185
Printers from £149 — Fax / Modems from £76
Video / Video Capture Cards and many more good quality items with 90 days warranty. Prices inclusive of VAT.
NEW POWER MACS & PERFORMAS
BUSINESS FINANCE
HIRE PURCHASE AND LEASE TERMS AVAILABLE
YOUR VITAL SOURCE OF SOLUTIONS
CALL US ON
Tel: 0118 942 0400 Fax: 0118 945 2003
Email: Megasoft@Patrol.i-way.co.uk
Credit Cards and Amex welcome. Normal card surcharge applies.

Problems transferring data between different computers?
We can copy **Amstrad PCW / CPC / BBC / Amiga / IBM / Mac / Apple II / Sinclair QL**
(3" / 3½" / 5¼" floppy disks
Mac or PC SyQuest / Zip)
Text & Image scanning
Details (sae please)
MAPEJ (MF)
Meadow View, Quinta Crescent,
Weston Rhyn, Oswestry,
Shropshire SY10 7RN
Tel: 01691 778659
Fax: 01691 777638
http://www.compulink.co.uk/~digby/Mapej.html


THE IMAGING BUSINESS
STATE OF THE ART
REPROGRAHICS
0171 700 0381

SYSTEMS QUOTE
BUY SELL TRADE
New & Second Used Equipment For Sale
Quadra • LC • Centris
PowerMacs • Performas
Powerbooks • Scanners
Printers • Monitors
Part Exchange Welcome
Phone for Latest Prices
Tel: 0118 942 2755
Fax: 0118 942 2729
VISA MasterCard SWITCH

GDA COMPUTERS
We have a **huge** range of **New & Used** equipment. Please call for professional advice and the **best deals** on all **New & Used Mac hardware and software!**
Authorized Reseller
Tel: (01344) 485414
Fax: (01344) 485415
USED MACS BOUGHT & SOLD!

SECOND USER APPLE MAC SYSTEMS

Second Byte Computers Ltd
Tel: 0171 609 4715
Fax: 0171 609 0991
E-mail: secondbyte@secondbyte.co.uk
Web Site: http://www.secondbyte.co.uk

COMPACT MAC	complete with Kb/mouse		
▶ Mac SE30	(68030/16)	8/40	£195
DESKTOP MAC SYSTEMS	complete with Kb/mouse, Apple 13" RGB Display & System 7.1		
▶ Mac LC	(68020/16)	4/40	£299
▶ Mac IIsi	(68030/20)	5/80	£320
CLARISWORKS 3.0 WITH ANY SYSTEM £25.00			
▶ Mac IIci (68030/25) 4/80 ◀ £350.00	Many people regard the Mac IIci as the peak of evolutuion of the 68030 Mac II range...Today a still desirable second-hand bargain." - MacFormat January 1997		
▶ Mac IIvx	(68030/32)	8/80	£425
▶ Quadra 650	(68040/25)	8/230CD	£550
▶ PowerMac 6100	(PPC 601/60)	8/500CD	£750
▶ PowerMac 7100	(PPC 601/66)	8/500CD	£850
POWERBOOK DUO			
▶ Duo 230	(68030/33)	8/120	£399
▶ Duo 280	(680LC40/33)	8/200	£575

Duo Desktop System Duo, DuoDock, kb/mse, Apple 13" RGB Display, from £825

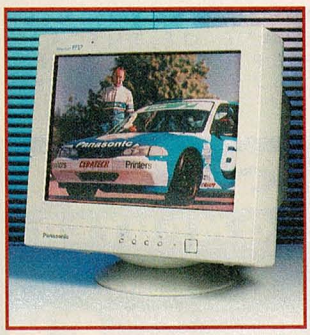
All prices include VAT @17.5%
All systems come with 6 months RTB warranty
Visa/Mastercard welcome
E&OE
Alternative configurations available

INTERNET SPECIALISTS...
Access — National dialup for the price of a local call...
Training — From beginnings to beyond...
WWW — Complete range of World Wide Web solutions...
City NetGates Ltd
51 Broad Street • Bristol • BS1 2EP
Tel: 0117 907 4000
email: info@netgates.co.uk
http://www.netgates.co.uk/
Café — Experience the net in relaxed informal surroundings...
net gates

Product news continued

and prints it out on the attached printer. The Astra 600-S is priced at £199 and is available from IMC Distribution on 01344 871329; or visit the Web site at **http://www.imcnet.com/**

The future's flat



The **PanaFlat PF70** is the new, flat-screen monitor from Panasonic. It's a 17-inch model that uses Cathode Ray Technology instead of the conventional LCD design, which makes it cheaper to manufacture. This saving is then reflected in the retail price, as the PanaFlat PF70 costs just £752. (LCD flat-screen prices average £1,000.) Its totally flat screen provides a quality picture, and the high resolution of 1,280 x 1,084 means better image contrast and colour vibrancy. Panasonic has developed the glass with a stripe pitch of just 0.24mm, which makes it comfortable to look at and crispens detail. The PF70 is a professional graphics monitor aimed at anyone who's into technical or 3D design, including engineers and architects. Contact Panasonic on 0500 404041 or check out the Web site at **http://www.panasonic.co.uk/**

Grand Prix gizmos

Grand Prix Legends has produced a collectable series of **Formula One mousemats** for motorsport fans. The vibrant designs have been taken from the official Formula One World Championship poster series. Choose from David Coulthard's McLaren-Mercedes and the Union Jack or Michael Schumacher and the German flag, or a collage of flags from every country that stages the Grand Prix. Each mat costs just £9.99. Contact Grand Prix Legends on 0171 616 1900.

Graphics advantage

Following its move to reduce prices, Wacom is now offering extra software

➤ page 134

Name	Price	Rating	Reviewed	Contact	Telephone
FileMaker Pro 3.0	£234	96%	MF37	Claris	0181 756 0101
MF CLASSIC An excellent database that's been tweaked and tuned, and is now fully relational.					
Organiser 2	£81	86%	MF46	Claris	0181 756 0101
Able to handle links between information both internally and to the Net – no networking, though.					
Spreadsheet 2000	£93	93%	MF52	Softline	0181 401 1234
MF CLASSIC Innovative spreadsheet – great at analysing data, but less adept at complex interrelated calculations.					
Up-to-Date & Contact 3.5	£116	89%	MF31	Now! Software	01525 237001
Dynamically-linked duo of contacts manager and diary. Occasionally a little too complex for its own good.					
Word 6.0.1	£220	92%	MF20	Microsoft	0345 002000
MF CLASSIC The world's favourite word processor has a monumental feature list but a bewildering array of controls.					
WordPerfect 3.51	£194	88%	MF48	Corel	0800 973189
A fully featured word processor that's every bit as powerful as any of its rivals, and friendly with it.					

Internet and comms

These days communications and the Internet are virtually synonymous, and the latest generation of Web browsers handle e-mail, FTP, Usenet and anything else you might want to do on the Net.

Name	Price	Rating	Reviewed	Contact	Telephone
Em@iler	£58	82%	MF42	Claris	0181 756 0101
Neat and attractive e-mail application that handles mailboxes, enclosures and address books painlessly.					
Eudora Pro 3	£75	83%	MF42	Electric Mail	01223 501333
Very powerful e-mail application with a new, friendlier interface that doesn't quite hide some murky technical depths.					
Internet Explorer 3	Free	78%	MF39	Microsoft	0345 002000
Microsoft's browser isn't as good as *Netscape,* but it is free. We reviewed *Internet Explorer 2.*					
Netscape Navigator 3	$49	94%	MF39	Netscape at http://home.netscape.com/	
MF CLASSIC The world's favourite Web browser does everything rather too well for comfort. We reviewed *Netscape 2.0.*					
Snap Mail 2 (5-user pack)	£206	90%	MF42	Softline	0181 401 1234
MF CLASSIC Simple and fun networked e-mail software that requires no administrators or complex set-up procedures.					

Utilities

Whether you want to add features missing from the regular Mac Finder or protect your set-up from System crashes, there's a utility to do the job.

Name	Price	Rating	Reviewed	Contact	Telephone
Conflict Catcher 4	£81	72%	MF51	Softline	0181 401 1234
Eases the drudgery of sorting out Extension clashes and helps to free up RAM, but it's looking expensive and limited.					
Norton Utilities 3.2	£116	88%	MF42	Symantec	01734 814230
Superficial enhancements to a dated application that's not even PowerMac-native yet. Still market leader... for now.					
Personal Backup	£46	92%	MF29	Softline	0181 401 1234
MF CLASSIC Automated back-up scripts that can run near-invisibly in the background at pre-set times.					
PopupFolder 2.0	£46	87%	MF35	Softline	0181 401 1234
Hierarchical folder menus up to 16 levels deep both in the Finder and in **Find** and **Save** dialogue boxes. Paradise!					
RAM Charger 3.0	£18	93%	MF47	Syncronys	00 1 213 340 4100
MF CLASSIC Frees up megabytes of precious RAM, runs on any Mac, and is compatible with Virtual Memory.					
RAM Doubler 2	£71	92%	MF43	CU	0181 357 5857
MF CLASSIC If you have a modern Mac, *RAM Doubler* is so essential a utility you'll wonder how you coped without it.					

Graphics

From image editing to professional illustration to 3D design and raytracing, here's our pick of the top Macintosh graphics packages.

Name	Price	Rating	Reviewed	Contact	Telephone
Bryce 2	£234	93%	MF38	Principal	01756 704040
MF CLASSIC 3D landscape creation tool that's more versatile than its predecessor and can create indoor scenes too.					
Canvas 5	£469	86%	MF49	Principal	01756 704040
A solid and well-featured all-rounder with image editing, drawing and page layout tools in one package.					
Cinema 4D 4.2	£699	93%	MF50	HiSoft	0500 223660
MF CLASSIC This 3D package offers power, speed and superb results, with features that match any of its rivals.					
CorelDraw 6	£465	91%	MF44	Corel	0800 973189
MF CLASSIC *CorelDraw* is great as long as you have a PowerMac and plenty of RAM and hard disk space.					
Dabbler 2	£59	90%	MF35	CU	0181 358 5857
MF CLASSIC Natural media painting program for those awed by multi-layered dialogues and complex options.					

Rack Systems UK
www.rack.demon.co.uk
SYSTEMS • STORAGE • MONITORS

PRINTERS • SCANNERS • MEMORY
Call Now for Best Price
0113 225 4480
Delivery Trade In Education Repairs Software

VISA

* REPAIRS *
FREE ESTIMATES
MAINTENANCE TERMS
SPARE PARTS
ANY FLOPPY DRIVE
£45
* TECS LTD *
0181 776 8060

MAC TRAINING
QuarkXPress Photoshop Illustrator
You don't have to go to London to receive Professional training...
For Mac training courses from beginners to advanced tailored to your specifications
come to BATH
Call us on 01225 483284
or Fax for details on 01225 444818
Profile

Scan
WET PROOFING
PLATE MAKING
C.D. ARCHIVING
BENCH PLANNING
FILM SEPARATIONS
TRADITIONAL CAMERA
HIGH RESOLUTION SCANS
3M MATCHPRINT PROOFS
HIGH QUALITY REPROGRAPHIC SERVICES IN N1
29/30 ST ALBANS PLACE,
ISLINGTON GREEN, LONDON, N1 ONX
TEL: 0171 226 0400 FAX: 0171 226 0057

MODEM DIAL
STRANGEWAYS B.B.S
Full Access in 2 Minutes
0891 408040
THE MOTHER OF ALL BBS's
+ 105,000 Programs On-Line
+ Gigs of Glamour Pics
+ Games, Business, Pleasure
+ Speeds up to 38,400 MNP5
+ Live On-Line Chat
+ Easy To Use System
+ Exclusive On-Line CDs
+ No Boring Questionnaires
CALLS CHARGED AT 50P PER MIN. C.D. INTERNATIONAL, PO BOX 107, MANCHESTER M7 3WZ

MAC MUSIC

Midi Keyboards .....from £59
Midi Interfaces .....from £35
Notation Software .....from £99
Cubase.....from £99
Yamaha MU 10 Module.....£189
tech-mate
215 Harwich Road
Colchester Essex CO4 3DF
FREE INFO PACK
Call
01206 864994
E-Mail sales@techmate.demon.co.uk
01206 793355
FAX 01206 864994
http://www.tech-mate.co.uk
Prices include VAT

MAD MACS ...where the pre-enjoyed Macs are
We Sell Used Macintoshes:
PowerMacs, Quadras and Performas at bargain prices.
PowerBooks? —— call PowerBook Central at Mad Macs.
Monitors, Printers, CD Drives, Keyboard, Mice, etc.: Mad Macs is the place.

Mad Macs's KERAIZEE Summer Bundles (but buy 'em while they last)...

PowerBook Duo 230 12/120, DuoDock, Colour Screen & K/B £ 695

Desktop Bundles...	SE/30	LCII	IIcx	IIsi	IIci
Computer (CPU) only	—	£120	£85	£140	£160
CPU, K/B	—	£145	£110	£165	£185
CPU, K/B, Screen(1)	£175	£255	£260	£275	£295
CPU, K/B, Screen(1), Printer(2)	£265	£345	£350	£365	£385
CPU, K/B, Screen(1), Printer(2), Modem(3)	£315	£395	£400	£415	£435

Desktop Bundle prices are based on 4/40 configurations. Others available at extra cost.
(1) 13" Apple Colour Monitor, except in case of the SE/30 which has a built-in mono screen.
(2) *NEW* Apple StyleWriter 1500 colour printer with up to 720 x360 dpi.
(3) *NEW* External 14.4 bps data/fax modem.

We Also Sell Macintosh Memory:

Types of RAM...	4Mb	8Mb	16Mb	32Mb	64Mb
30-pin SIMMs	£22	£44	£78	—	—
72-pin SIMMs	£16	£30	£60	£120	—
168-pin DIMMs	—	£33	£61	£126	£238

Also: RAM for 4400s, clones, PowerBooks; V-RAM & Cache memory— ASK!
RAM prices are especially volatile so always call first for our latest memory prices.
All Mad Macs memory is fully-tested and sold with a lifetime warranty.

MAD MACS
All products carry a full no-quibble six-month RTB parts and labour warranty. Free overnight delivery to most of UK for orders over £100.
These business-user prices exclude 17.5% VAT. Others welcome but please note this.
Offers apply while stocks last; prices and specs may change without notice. E&OE. All trademarks acknowledged.
Phone 01379-788080
Fax 01379-783293
Mastercard VISA

SOLVE YOUR COLOUR COMMUNICATION PROBLEMS & HIT THAT COLOUR FIRST TIME!
Use 'The Tint File'™
The definitive CMYK colour reference book
OVER 20,000 CMYK ILLUSTRATED COLOURS,
allowing the user to match and specify colours in the CMYK percentages. Colour samples from non-CMYK (special colours) or colours from a computer screen, are misleading. Overcome this by using 'The Tint File'. Select your colours at the outset by referring to the litho-printed 'Tint File' and the problems involved in colour specification will just go away! It is possible to accurately input percentages of CMYK and know what the litho result will be. Due to its unique design, you can easily match or choose any practical colour with the supplied colour selectors in seconds from the full range of CMYK. Any single - two - three - or - four colour percentage combination, including the Black, is illustrated from 5%-100%. Produced to high specification, with 28 pages plus cover, briefcase sized, measuring 345 x 250 mm, 'The Tint File' sets a standard for Publishers, Designers, Repro houses, Printers etc. U K R.R.P. £75.00
'TintMatch'™ Software,
allows you to reproduce Cyan, Yellow, Magenta combinations on your own house equipment as illustrated in 'The Tint File'. The software comes with four Litho printed Colour Wheels to calibrate your results. U. K. Rec. Retail Price £49.95 or purchase both for £99.95 plus VAT where applicable (£106.07 inc. VAT). For more information or to order 'The Tint File' or 'TintMatch' or both, Tel / Fax: 01222 708648
Internet: http://www.netwales.co.uk/tintfile or write to: Tintmaster Publications 'Windrush', Sully Rd. Penarth, Cardiff, CF64 2TQ.

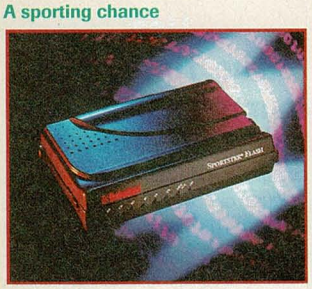
Product news continued

with its **ArtPad II** graphics tablet for a limited period. Until Monday 1 September 1997, MetaTools' *Photoshop* plug-in *Kai's Power Tools 3.0* is included with any ArtPad II purchase. This image-editing software is added to the existing *Dabbler 2.0SE* bundle. Equipped with Fractal Design's *Dabbler* drawing package and *Kai's Power Tools*, you can use the ArtPad to draw and paint, creating 3D effects, textures and multicolour gradients. The graphics pad also includes Wacom's own Ultra-Pen Eraser, a highly flexible, pressure-sensitive tool for drawing and erasing your work. Wacom's ArtPad II with *KPT 3SE* is just £135. For a complete list of Wacom products, phone Computers Unlimited on 0181 358 5857 or visit the Web site at **http://www.wacom.de/**

PCMCIA cards

Memory Card Technology has launched a new range of ten **memory cards.** The 68-pin flash cards cost from £88 for a 4Mb card to £763 for a 64Mb card. They are affordable and speedy removable storage devices – the ideal memory solution for mobile computers, such as the PowerBook, and digital cameras. For more information contact MCT on 01753 685444.

A sporting chance



US Robotics has reduced the price of its **Sportster Voice 33.6Kbps fax-modem** from £199 to £149. The Sportster Voice has some handy features, such as a digital answering machine and call discrimination, which automatically distinguishes between incoming phone calls and faxes. Any purchase entitles you to a free upgrade to US Robotics' x2 technology, a 56Kbps system that works over normal phone lines. To find out about other models, see our modem round-up on page 70. Alternatively, call US Robotics on 0118 922 8200 or visit its Web site at **http://www.usr.co.uk/**

➤ page 136

Name	Price	Rating	Reviewed	Contact	Telephone
Detailer	£328	85%	MF46	Principal	01756 704040
Detailer is powerful, fast and satisfies a genuine need for a form of direct 3D image mapping every artist can understand.					
FreeHand 7	£529	82%	MF47	CU	0181 358 5857
A significant improvement on the previous version, this illustration giant is well worth upgrading to.					
Infini-D 3.5	£469	85%	MF42	Gomark	0171 731 7930
3D modelling, rendering and animation package that's easy to use but produces rather crude and mechanical results.					
Kai's Power Goo	£58	90%	MF41	Principal	01756 704040
MF CLASSIC With many professional-level tools, *Goo* might be the best fun you'll have with a graphics package.					
Painter 4	£469	91%	MF35	CU	0181 358 5857
MF CLASSIC Blends traditional painting tools and media with mouse pointers and Bézier curves.					
PhotoDeluxe	£88	85%	MF39	Adobe	0181 606 4000
Innovative and powerful photo manipulation package at a bargain price – if you've got the hardware needed to run it.					
Photoshop 4.0	£635	92%	MF47	Adobe	0181 606 4000
MF CLASSIC The world's most popular image editor gets even better with a careful rethink of existing capabilities.					
Expression	£151.58	90%	MF49	Principal	01756 704040
MF CLASSIC Natural media drawing program won't replace FreeHand, but it's useful, fun and good value.					
3D World 2.0	£116	78%	MF45	Microspot	01622 687771
A powerful, great value, basic 3D package – a good toy and superb learning tool, but nothing more sophisticated.					
xRes 3	£645	91%	MF38	CU	0181 358 5857
MF CLASSIC Heavyweight graphics package aimed at a market beyond *Photoshop*. We reviewed xRes 2.					

Video and animation

Once restricted to professional studios, video creativity is coming into its own on the Mac, especially as you can now broadcast through the World Wide Web and QuickTime.

Name	Price	Rating	Reviewed	Contact	Telephone
After Effects 3.0	£600	83%	MF45	Adobe	0181 606 6000
Great features make *After Effects* a very cost-effective way to give your movies a professional touch.					
Animation Works	£153	85%	MF26	Gold Disk	01734 814230
Aimed more at youngsters than professionals, but still needs drawing skills and an understanding of cel animation.					
Elastic Reality 1.21	£293	90%	MF26	Softline	0181 401 1234
MF CLASSIC Heavyweight morphing application that's more sophisticated than its cheaper rival *Morph*.					
Final Effects 3	£151	87%	MF45	Principal	01756 704000
The additional cost of *Final Effects* is well worthwhile, as this collection of plug-ins takes After Effects to new heights.					
Morph 2.5	£117	84%	MF26	Softline	0181 401 1234
Powerful and enjoyable morphing program at an affordable price. Easy to use, although lacking in professional features.					
Premiere 4.2	£586	90%	MF21	Adobe	0181 606 4000
MF CLASSIC The pro's choice, this video editing suite offers sophisticated features. We reviewed *Premiere 4.0*.					
PROmotion	£149	80%	MF26	Gomark	0171 731 7930
Animation program for serious or professional users, which requires skill and know-how. Can output to videotape.					

Music and audio

The Macintosh is one of the mainstays of the professional music industry, and boasts a wealth of high-quality software for MIDI, sequencing, scorewriting, sound editing, and direct-to-disk recording.

Name	Price	Rating	Reviewed	Contact	Telephone
Cubase VST 3.02	£329	93%	MF50	Harman Audio	0171 207 5050
MF CLASSIC A highly graphic, high-tech sequencer with a superb range of digital audio features.					
Deck II v2.5	£410	84%	MF38	CU	0181 358 5857
Direct-to-disk recording program that also has many uses for multimedia authors and post-production studios.					
Musicshop 2.0	£93	84%	MF52	MCM	0171 723 7221
This low-cost introduction to music recording and editing is excellent value, if a little short on features.					
Logic 2.6	£649	92%	MF50	Sound Technology	01462 480000
MF CLASSIC One of the most powerful sequencers around – great for anyone serious about making music.					
MusicTime	£100	90%	MF27	Arbiter	0181 202 1199
MF CLASSIC An excellent budget-priced scorewriter that can use QuickTime's Musical Instruments Extension.					
Overture	£234	90%	MF24	MCM	0171 723 7221
MF CLASSIC Application for converting your MIDI compositions into printed scores in musical notation.					
Session 2	£175	89%	MF33	Digidesign UK	0800 898 331
Affordable direct-to-disk recording program. You miss out on some features, but it's still up to professional use.					
Visual Arranger	£39	90%	MF26	Yamaha	01908 366700
MF CLASSIC MIDI application for those who want to create a lot of music for relatively few musical skills.					
X<>Pose Visual Sampler	£449	85%	MF49	Harman Audio	0171 207 5050
Displaying visual effects in response to MIDI data, this has many practical applications in addition to being good fun.					

1,000 £50
FULL COLOUR BUSINESS CARDS
Litho Print • 350 gsm Card • Gloss Varnish
Free design. Or send yours on disk!
POSTCARDS / LETTERHEADS / COMP SLIPS...
For samples call 01582 658262
Fax: 01582 563533 • dbu1@cableol.co.uk.
http://www.cableol.net/dbu1/colourcards/
F.B.I.

SKOOT designs
<Nu-type innovation by young designers: exclusive to Skoot. Please send SAE for font catalogue. Thankyou.>[end.]
Skoot Designs. PO BOX 12603, London, SE14 5WX

REFURBISHED TEKTRONIX
Phaser Colour Printers
3 Years Warranty for New, 2 for Refurb Printers
• We sell new and used
• Free delivery in UK only
• More info on our Website
• Call for full Specifications
Tektronix Supplier

Dye Sublimation			Solid Ink		
Phaser IISD	A4	£2499	Phaser 340 plus	A4	Call
Phaser 440	A4	£3999	Phaser IIIPXI	A3	£2299
Phaser 450	A4	£4999	Phaser 300i	A3	£3299
Phaser 480X	A3	£8999	Phaser 300X	A3	£4299
Phaser 480XC	A3	£9699	Phaser 600	A0	£7999

We beat any quote on New & Refurbished Tektronix Printers
We Rent Tektronic Printers
Colour Printer Consumables
We Beat Any Price
• Tektronix • Kodak • Imation • ICI
•Mitsubishi • Image Pro • Shinko
• We promise to beat any price on above brand names
(Refurb) Apple, Gcc & HP Printers
Delta Trading House
Website: www.deltatradinghouse.co.uk
To Order Call 0181 348 2172

Christian Computer Art
Discs and huge CDs of illustrations for teaching RE, church magazines, posters, OHPs etc. Incl. all the Good News Bible pictures. From £5.75/disc for most computers.
Free colour catalogue & Sampler disc
Christian Computer Art
33 Bramley Way, Hardwick,
Cambridge, CB3 7XD
Tel. 01954 210009

USED MAC EQUIPMENT
Bought and sold
Best realistic prices paid
Anything considered, working or not.
Phone 0161 439 2414
10am-4pm Mon-Fri

OUTER LIMITS BBS
0891 230044
Outer Limits, PO Box 67, Kidderminster, DY10 4YQ
Calls charged at 50p/min at all times

To Advertise your products or services call Jacqui on: 01225 442244

Bar Code Generation Software
MacBARCODA
• High-quality barcodes - all popular types.
• Works with all major graphics software.
• The most precise Mac barcode package.
Label Printing Software
macthermal
5 012345 678900 >
LabelDesigner
• Choose Label Designer for PostScript laser, or MacThermal for reel-fed thermal printing.
• Barcodes, text, sequential numbering, graphics, mail-merge, AppleEvents.
Also - Bar Code Readers
Computalabel INTERNATIONAL LTD
53a London Road, Leicester, LE2 0PD, UK
Tel: 0116-255-7898 Fax: 0116-255-7899

G & N Computers
Apple Authorised Reseller
PowerMacs
Super prices on the latest new range of PowerMacs - 4400, 7300, 8600, 9600 Large number of Apple Refurbished (B-Stock) 8200, 7600 & 8500. Used PCI and Nubus PowerMacs now available.
Monitors
14inch from £159, 15inch from £209
17inch from £349, 20inch from £819
Complete System Bundles
for Graphics Design, Audio & Video Workstations
Tel: 01324 821011
Fax: 01324 821007
E Mail: gandn@post.almac.co.uk
G&N Computers, Helenbank House, Herbertshire Street, Denny, Falkirk, FK6 6HF.

MACOLOGY
Macintosh Sales, Service and Repairs.
Network Installations.
Internet Solutions/Upgrades.
Competitive Quotes
Call for Consultation
Tel: 0973 211137
Fax/Ansa: 07000 211137
This is not a premium rate line
email: ian@macology.demon.co.uk

To Advertise in Mac Format Magazine
Call Jacqui Russell on 01225 442244
Free Design Service

MAC REPAIRS
Same Day Call-Out
Specialists in hardware & software troubleshooting including:
■ On-Site Repairs ■ Maintenance Contracts
■ Memory Upgrades ■ Network Solutions
■ Hard Disk Upgrades ■ Data Recovery
■ LaserWriter Servicing ■ Sales
DNA Computer Services Limited
Apple Authorised Engineers
Office: 0181-742 3524
Tel: 0831-295 099 & 0385-261 258

PROTEUS
Mac & PC Graphics Design Company • Established 12 Years
35mm Slide Imaging from £3 per slide • Design • Screen Shows
OHPS • Prints • Disk Conversions • Scans • CD Writing £19
1-to-1 Training • In Fact EVERYTHING!
Open 8am-8pm • Fast turnaround in London W1
The Best Company for the Best Deals!
Tel: 0171 240 2494 ISDN: 0171 636 6437 74 Margaret St. W1
compuserve: 101677.1526 email: peta@proteus.u-net.com

Product news continued

ScanMaker software solutions

Microtek has new software bundles for **ScanMaker,** its flatbed desktop scanner. ***ScanMaker Designer Pro*** and ***ScanMaker Office Plus*** combine creative software with a fast 36-bit colour scanner – ideal if you demand sharp, professional images.

The *Office Plus* bundle (above) includes Microtek's own scanner software *ScanWizard* and a host of other features, including an automatic document feeder that enables you to scan up to ten pages at once, a colour calibration kit, and an image processing CD-ROM containing *PhotoImpact, OmniPage LE, ImagePals 2 GO* and *Color It!* programs. The *Office Plus* scanner bundle costs £1,099 and has all the components to get any business off to a creative start.

The £1,599 *Designer Pro* bundle also includes *ScanWizard,* the colour calibration kit and the image processing CD-ROM.However, the *Designer Pro* bundle offers even more solutions for creating professional images, including *Photoshop* and *Painter* image editing software. Wacom's ArtPad graphics tablet is also part of the package, and there's a special lighting attachment for scanning slides, negatives and transparencies. Contact Computers Unlimited on 0181 358 5857 or visit the Web site at **http://www.unlimited.com/**

NetCenter debuts

Our cover feature this issue shows you that networking can make your life a lot simpler. Dayna reckons it's got affordable network starter kits for your small business or education site. It has produced a range of hubs that can accommodate all your current networking demands and adjust to your needs for the future. **NetCenter** enables you to transfer and access information through file sharing, and connect to the Internet. You can share peripheral devices too, by plugging a lead from the hub into a printer, CD drive, modem or storage device. You can also set up a storage device as a server for all your shared files. You can stack your NetCenter devices either vertically or horizontally, saving you space. Prices

➤ page 138

Publishing and electronic media

Publishing today is about far more than print: you can also produce material as multimedia for CD-ROM or the Web, or use an HTML editor to create Web pages from scratch.

Name	Price	Rating	Reviewed	Contact	Telephone
Astound	£222	91%	MF36	Gold Disk	01734 814230
MF CLASSIC A top presentation tool which makes handling quite complex actions easy.					
Authorware Academic	£150	95%	MF43	Prentice Hall	01442 882266
MF CLASSIC Icon-based multimedia creation at its finest, this power-packed program is for education only.					
BBEdit 4	£112	85%	MF47	Full Moon Software	01628 660242
This Web authoring tool is definitely not for beginners, but it's very powerful in an expert's hands.					
BeyondPress 2.0	£570	85%	MF40	XChange	0171 637 2966
Easy to use *XPress* XTension for converting *XPress* pages into HTML. No support for font tags or frames, though.					
Digital Chisel HTML 2.1	$159	89%	MF36	Pierian Spring	00 1 800 472 8578
Powerful entry-level educational package with a simple interface. We reviewed *Digital Chisel 2.0.*					
Director 5.0	£1,174	85%	MF41	CU	0181 358 5857
A sound upgrade to the industry leader for media authoring, which irons out many shortcomings. It's easier to use, too.					
Director Academic	£46	95%	MF43	Prentice Hall	01442 882266
MF CLASSIC De-facto standard for multimedia creation in a cut-down version – for education only.					
Home Page 1.0	£81	91%	MF47	Claris	0181 756 0101
MF CLASSIC Claris's Web page maker is good for beginners but still offers you room to grow.					
HyperStudio 3.0	£121	88%	MF36	TAG Developments	01474 357350
Practical and powerful tool aimed more at education than multimedia authors per se. More text styling tools are needed.					
PageMaker 6.5	£470	93%	MF50	Adobe	0181 606 4000
MF CLASSIC This DTP heavy-hitter is powerful, flexible and wonderful to design with, but you need a powerful Mac.					
PageMill 2.0	£116	90%	MF47	Adobe	0181 606 4000
MF CLASSIC A powerful, easy-to-use program with excellent support for advanced features like frames.					
Print Artist 4.0	£30	90%	MF52	Sierra	0118 920 9100
MF CLASSIC Starter DTP package which offers great clip art and templates, loads of special effects and is easy to use.					
QuarkImmedia	£1,169	91%	MF48	XChange	0171 637 2966
MF CLASSIC This XTension for *QuarkXPress* adds easy-to-use multimedia and Internet production features.					
QuarkXPress 3.32	£1,169	88%	MF48	CU	0181 358 5857
The market-leading DTP package costs plenty, but it's robust, powerful and flexible, right up to that final deadline.					
SuperCard 3.0	£308	84%	MF51	Gomark	0171 731 7930
Simple multimedia authoring and complex object-oriented programming combined – powerful but patchy.					

Multimedia CD-ROMs

The invention of the CD-ROM has created a whole multimedia publishing industry turning out educational, reference and leisure titles by the score.

Name	Price	Rating	Reviewed	Contact	Telephone
ABC of Animals	£40	90%	MF47	Creative Wonders	01753 549442
MF CLASSIC Covering a wide range of animals across the globe, this CD is educational and a well-designed treat.					
Cinemania 97	£30	92%	MF47	Microsoft	0345 002000
MF CLASSIC If you have a CD-ROM drive, £30 and even the slightest interest in cinema, this is an essential buy.					
Encarta 96	£50	83%	MF42	Microsoft	0345 002000
Microsoft's multimedia encyclopedia is definitive, but the Mac interface is flawed.					
Eve	£40	95%	MF52	Real World	01225 743188
MF CLASSIC Ignore the New Age fluff – Peter Gabriel's second CD-ROM project is gorgeously clickable.					
Encyclopedia of Science 2.0	£40	90%	MF52	Dorling Kindersley	0171 753 3488
MF CLASSIC A comprehensive trip through the world of science, providing you with easily accessible information.					
Makers of the 20th Century	£45	89%	MF41	News Multimedia	01525 852 813
200 personalities of the 20th Century are examined and explained in a well-presented and often intriguing CD.					
Music Central 97	£30	85%	MF47	Microsoft	0345 002000
A well-researched and thorough delve into the world of popular music, even if some of the entries do seem quite obscure.					
The Mystery of Magritte	£40	90%	MF46	MIP	0171 881 8000
MF CLASSIC A radical look at one of the world's greatest artists. It'll make you question your very existence.					
Picasso	£40	88%	MF46	Grolier Interactive	01865 264000
An educational and entertaining trawl through the life and works of one of the world's greatest artists.					
RedShift 2	£50	92%	MF32	Maris Multimedia	0171 488 1566
MF CLASSIC Restrained but magnificent exploration of the universe using sound astronomic principles.					
The Way Things Work 2.0	£40	88%	MF45	Dorling Kindersley	0171 753 3488
Full of clear explanations and plenty of fun. Kids will find this easy to use, and can learn at their own pace.					
World Reference Atlas	£50	90%	MF37	Dorling Kindersley	0171 753 3488
MF CLASSIC Bestrides the Earth like a colossus, giving you the information you need, when you need it.					

http://www.futurenet.com

MacWeb
How can I increase my RAM cheaply?
Help! My Mac's crashed! What can I do?
What's the best free source of graphics?
How do I make my own Web site?
What CD-ROM should I buy for my kids?
FilmWeb
Where can I get The Lost World trailer?
When did Tarantino play Elvis?
When is Batman & Robin released?
Will Tom Cruise win Best Actor?
What film made the most money in '96?
MusiciansNET
What does an A flat minor look like?
What's the best TB-303 clone?
How can I play like John Lee Hooker?
How do Erasure produce their sound live?
Where can I buy a new Fender amp?
PCNet
What type of modem would best suit me?
How do I upgrade my PC?
What is the best application software?
Which notebook computer should I buy?
What sound set-up should I get for my PC?
CyclingNet
What's the best entry level bike?
How do I fit Gor-tex cables?
Where are the best trails?
How do I stay fit?
How do I learn to bunny hop?
SFNet
Who shot Scully's sister in the X-Files?
Who stole Babylon 4?
Name the Doctor in the Who TV movie?
Who directed Star Trek:First Contact?
Who directed the smash 12 monkeys?
CRAFTNET
Where's my nearest craft shop?
Who's Jo Verso?
How can I make my cross stitch even?
When is there a craft fair near me?
Where's my nearest Anchor supplier?
FootballNET
How much did Vialli cost Chelsea?
What are John Motson's favourite games?
Who are the great football legends?
Which club is the best in the world?
Where can I buy a Notts Forest strip?
GAMENET
What is DVD?
Which APS is best?
How fast is MMX?
Pro Log & Nicam - what's the difference?
How much is Super Mario 64?
TotalNet
How do I get on to the Internet?
Should I buy a 56kps modem?
Who controls the Internet?
What is Java anyway?
How can I publish my own Web pages?
FoodNet
How do I do flambé?
What can I make with this?
What's the thing you use to sift flour?
What should I do with a quince?
How many grammes are there in an ounce?
TechZONE
What does NTSC stand for?
What is PlayStation's CPU?
What two chips power the Saturn?
Who created Magic: The Gathering?
Who is Shigeru Miyamoto?
ClassicalNet
What does a conductor actually do?
What is classical music anyway?
How exactly do I pronounce Dvorak?
Is there a fan club for José Carreras?
What are the best new CDs to buy?
MangaNet
What is Manga?
What does OAV stand for?
What do the clowns in Akira ride on?
Where is Barefoot Gen set?
When was Akira first published?
TotalCar
What's the mpg of a Lotus Elise?
Is there a 300zx for sale near Southend?
What's the cheapest MPV?
What can I test drive today?
Which is my nearest Seat dealer?

Search for anything...

FutureNet.com

...find everything

FutureNet features content from all these market leading magazines published by

Future PUBLISHING
Your guarantee of value

COMPUTING
PC Plus
PC Format
PC Guide
PC Answers
PC Review
Mac Format
CDROM Today
Amiga Format
Computer Arts
Connect
.net

VIDEO GAMES
Official PlayStation Magazine
PlayStation Power
Edge
GamesMaster
PC Gamer
Sega Power

CRAFT
Celebrations in Cross Stitch
Cross Stitch
Cross Stitcher
Cross Stitch Collection
Machine Knitting News
Needlecraft
Quick & Easy Cross Stitch
Cake Decoration Monthly
Needlework
Sew Today
Cake Baking
Good Woodworking

MUSIC
Future Music
Keyboard Review
Total Guitar
Guitarist
Bassist
Guitar Techniques
Hip Hop Connection
Rhythm
Classic CD
The Mix

SPORT
Cycling Plus
Total Bike
Mountain Biking UK
Mountain Bike World
Total Football
Sailing Today

ENTERTAINMENT
T3
arcane
SFX
Total Film

Product news continued

start at £93.94. For more information and advice, contact Computers Unlimited on 0181 358 5857, or check out details with Dayna's own Web site at **http://www.dayna.com/**

Computers in your curriculum

Education specialist Xemplar has announced reduced prices for its **Performa 5260/120** computers for schools. The Apple Performa 5260/120 model is available from Xemplar at the exclusive price of £821. Bundled software options are also available, such as the *Reading Corner Resource Pack*, the *Natural History Resource Pack* and software specifically for young children. For just £997, you can even buy the Performa with an Apple StyleWriter 2500 colour printer. National initiatives to learn about computing, such as the recent "Computers Don't Bite" campaign, are encouraging schools to take advantage of special offers and bring technology into their classrooms. Phone Xemplar Education on 01223 724200 or visit the Web site at **http://www.xemplar.co.uk/**

Creativity for kids

It seems as if kids have all the fun. Anglia and PrintPaks have joined together to distribute the **Anglia Creative Kids** range. PrintPaks is one of the few companies that blends multimedia and crafts, and it constantly comes up with creative projects using CD-ROM software. The ***Super Create-A-Book Kit*** enables you to design and produce your own books. You can import illustrations and photos, and colourful paper, binding and book covers are all provided too.

As well as the *Super Create-A-Book Kit*, Anglia is also releasing three other applications. The ***Super Iron-Ons Kit*** enables you to design and apply customised transfers to your T-shirts, bags or hats, either from your own imported photos and artwork or from the software library.

The ***Pop-Up Greetings Kit*** creates cards with a picture on the front and a surprise pop-up message inside. This kit also includes everything you need to get started, such as bright envelopes and even double-sided sticky tape!

The ***Window Art Kit*** enables you to create images on transparencies to hang in your windows. Again, you can customise the software or import your own photos and designs, and the kit provides all the necessary equipment to get you started. All these kits cost £29.99, and subsequent refills are £12.99. Call Anglia Multimedia on 0171 579 4102 or check out the Web site at **http://www.anglia.co.uk/**

Multimedia for kids

How do you keep the kids entertained on a wet Sunday afternoon in November? Multimedia CD-ROMs for kids can entertain, occupy and educate all at the same time.

Name	Price	Rating	Reviewed	Contact	Telephone
Adiboo	£28	95%	MF46	Sierra	0118 920 9100
MF CLASSIC A fantastic learning adventure, packed full of activities and fun, keeping your kids fascinated for hours.					
Adventures of Peter Rabbit	£30	88%	MF43	Mindscape	01444 246333
A rare and challenging adventure game which will educate and captivate your kids.					
Counterfeit Collaborator	£28	90%	MF35	Sierra	0118 920 9100
MF CLASSIC A genuinely intriguing mystery forms the heart of this Playtoon CD.					
Darby the Dragon	£20	89%	MF44	Brøderbund	01429 273029
A rare and challenging adventure game which will educate and captivate your kids.					
Toy Story Activity Center	£40	85%	MF51	Disney Interactive	0181 222 1413
Beautiful, fun and educational too – a few more games might have made this a Classic.					
KidWorks Deluxe	£35	88%	MF43	ABLAC	01626 332233
An excellent package which encourages children to get involved in all aspects of story-making.					
Logical Journey of the Zoombinis	£30	96%	MF41	Brøderbund	01429 273029
MF CLASSIC A well-designed course in mathematical logic for kids that's disguised as a superb-looking and fun game.					
Maths Workshop	£30	90%	MF41	Brøderbund	01429 273029
MF CLASSIC Teaches maths in the broadest possible sense, with wonderful-looking activities and a good manual.					
My First Amazing World Explorer	£30	89%	MF41	Dorling Kindersley	0171 753 3488
Interactive atlas that's pitched at just the right level for younger children, showing the world as a diverse and living thing.					
Stanley's Sticker Stories	£20	88%	MF52	Iona	0181 296 9454
More than just another animated storybook, this disc helps your kids make their own colourful creations.					
The Time Warp of Dr Brain	£28	90%	MF50	Sierra	0118 920 9100
MF CLASSIC Insane, hilarious and educational, this is a gripping piece of multimedia.					
Word Stuff	£20	85%	MF39	Eidos Interactive	0121 606 1800
Teaches English and explains various everyday situations. An excellent blend of entertainment and real educational value.					

Games

As a games machine, the Macintosh rivals both the PC and the plethora of whizz-bang games consoles flooding the market. The best games tend to be those that involve brains as well as reflexes.

Name	Price	Rating	Reviewed	Contact	Telephone
Actua Soccer	£40	90%	MF46	Gremlin	0114 275 3423
MF CLASSIC A beautiful game about the beautiful game, and a superb debut performance for football on the Mac.					
Apache Longbow	£45	92%	MF41	Digital Integration	01276 684959
MF CLASSIC 3D Gouraud-shaded flight sim with real class and some fairly hefty hardware requirements.					
Caesar II	£35	85%	MF48	Sierra	0118 920 9100
An excellent, finely balanced *SimCity*-style title – absorbing and beautiful.					
Close Combat	£45	89%	MF48	Microsoft	0345 002000
A realistic war game with elements that will appeal to both tacticians and action junkies alike.					
Command and Conquer	£35	95%	MF51	Virgin Int. Ent.	0171 368 2266
MF CLASSIC The best game on the Mac, where strategy and shoot-'em-up combine to give a thrilling experience.					
F/A-18 Hornet 2	£69	93%	MF36	Softline	0181 401 1234
MF CLASSIC Realistic, absorbing and fun – an instant classic with imaginative and interesting missions.					
HIND	£45	88%	MF49	Digital Integration	01276 684959
This companion to *Apache Longbow* puts you in control of a Russian craft – a solid and engaging flight sim.					
IndyCar Racing II	£17	94%	MF42	Sierra	0118 920 9100
MF CLASSIC Spectacular simulation at its finest, and at a real bargain price. Stunning graphics and attention to detail.					
Marathon 2	£65	95%	MF35	Softline	0181 401 1234
MF CLASSIC A huge game task, addictive gameplay and excellent graphics and sound. What more could you ask for?					
MechWarrior 2	£50	89%	MF43	Activision	0181 742 9400
The controls take some getting used to, but *MechWarrior 2* is too addictive to let that worry you for long.					
Pro Pinball: The Web	£35	90%	MF44	Empire	0181 343 7337
MF CLASSIC The finest pinball simulator ever (full stop).					
Virtual Pool	£40	71%	MF52	Interplay	01628 423666
Generally excellent 3D pool game with one nagging glitch, which enables you to position your cue through a ball.					
WarCraft II	£45	93%	MF45	ZABLAC	01626 332233
MF CLASSIC A delight to look at and, in multi-player mode, as near to perfect as a game of this type has come.					
Weekend Warrior	$39	85%	MF50	Bungie	00 1 312 563 6200
Astonishing game-show violence, but you'll need a 3D graphics card and a PowerMac to use it.					
Worms	£30	89%	MF45	Team 17	01924 271637
Simple concept with almost endless tactical possibilities. Great multi-player game but let down by a clumsy interface.					

Free reader ads

Get out of the sun and into our Mac marketplace – it's the coolest place to be for the best bargains around!

Hardware for sale

■ **Mac Centris 610 20/230,** full 68040, 28MHz, CD-ROM, keyboard, mouse, plus Mac colour display. Home use only – £700. West Sussex ☎ 01903 762846

■ **LC630 20Mb/1Gb**, 14-inch monitor, 2x speed CD-ROM, keyboard and mouse with all manuals and boxes, plus system software and fax/data modem – £600 complete. ☎ 01732 360509

■ **Motherboard PowerMac 8200/120** sensible offers. NE England, Dave ☎ 0191 482 0690

■ **LC475 20/160**, 14-inch Apple monitor with keyboard, mouse, *QuarkXpress, Illustrator, FreeHand,* fonts, *RAM Doubler,* manuals. One owner, home use only – £600 ono. ☎ 01273 697392

■ **Mac 5320,** 120MHz, 16Mb RAM, *Microsoft Office, RAM Doubler, PageMaker,* Scanner, E3 printer – all as new and boxed. £1,450 ono, or swap laptop CD-ROM – cash either way. Glasgow, James ☎ 0705 350231

■ **Centris 610** 16/80, 1Mb VRAM, CD300e, two-speed, keyboard, mouse, microphone – £350. ☎ 01641 571248 (eves/weekends)

■ **LC475, 8/160**, 14-inch monitor, keyboard, mouse etc. Latest Mac OS and software – £600 ono. Call Fraser ☎ 01845 537553

■ **LCIII 4/80,** 14-inch Trinitron monitor, keyboard, mouse, microphone, manuals, System 7.1. All in excellent condition. *ClarisWorks 4.0,* extra books, software – £480. Aberdeen, Ian ☎ 01224 491582

■ **Quadra 650 20/160** with internal CD-ROM, keyboard, mouse plus many extras – only £650. Paul ☎ 01637 860219

■ **Global Village Teleport Platinum modem –** sale due to upgrade of computer. 6 months old – £140 ono. Mobile ☎ 0378 664668 (eves) or e-mail: r.hoddinott@compuserve.com

■ **SuperMac Spectrum 24** series IV, accelerator colour graphics NuBus card, 16.7m colours to 20-inch display. New and sealed – only £90. Hants ☎ 01256 465195

■ **Performa 6320** 120 MHz, 12/1.2Gb, CD-ROM, monitor, keyboard. Under warranty, still boxed – £875 ono. Derby ☎ 01332 550999

■ **PowerMac 7100/80** 96/700 CD CPU only. System software, cables, keyboard, mouse, 96Mb RAM – £950. Quick Sale. Chester ☎ 01244 677997 (days)

■ **ImageWriter II** with sheetfeeder and two black ink cartridges. Very good condition – £55. ☎ 01508 538159

■ **Performa 630 18/500** CD System 7.51, monitor and keyboard, software – £700 ono. Manuals, disks, *RAM Doubler* incl. ☎ 0171 354 2297 (eves)

■ **Mac IIci** 8/170 with monitor, keyboard and mouse, System 7, lots of installed graphics, software incl. *Quark* and *Illustrator* – £350 ono. Debbie ☎ 01252 375495

■ **Sony SF 15-inch Trinitron monitor** – £195. Plus Microtek Scanmaker II, *PhotoShop LE, Texbridge v3.0E, Presto PageManager SE* – all for £170. Peter ☎ 01424 429686 (after 6pm)

■ **Centris 660AV** 20/1Gb, upgraded CD-ROM and processor, base only – £550. ☎ 01480 300409

■ **PowerBook 5300 8/500** colour screen (better quality than 5300CS), excellent condition with pre-loaded software and games – £1,500 ono (was £2,700). Southampton, David ☎ 01703 473450

■ **IIci 16/200** CD with monitor and keyboard – £450. Macintosh IIsi 10/80, monitor and keyboard – £250. PowerBook 170, modem with extras – £350 – accessories, software. ☎ 01234 781403

■ **PowerMac 6100/60** 16/250 CD, keyboard, mouse, cables, 13-inch RGB monitor, LaserWriter IINT PostScript printer – all perfect – £850. Watford ☎ 01923 235865

■ **Two 16Mb 72pin SIMMs** (only two weeks use) – £90. 88Mb Syquest drive plus three 88Mb carts – £160. Dominic ☎ 01628 36402

■ **Quadra 630 20/250** Reno portable CD-ROM, Syquest EZ-135, Apple 15-inch multiscan monitor, keyboard, mouse, System 7.5, Hewlett Packard DeskWriter 660C – £1,100. David ☎ 01582 603890

■ **PowerMac powerpack**, plus *RAM Doubler* and *Speed Doubler,* full packaging and instructions – £20 ono. ☎ 01463 230803

■ **Performa 630 CD 8/350** including keyboard, mouse, System 7.5.5, and loads of software. *Claris Works.* £500 ono. Jon ☎ 0151 733 3709 or e-mail :gmqu4037@liv.ac.uk

■ **Classic 4/40**, System 7, StyleWriter printer, *MS Works,* computer carry case – £250 ono. Harrogate, contact Brian ☎ 01423 883632

■ **Powerbook 210 4/80** – £400. PowerBook 270c 12/340/EM – £700. External floppy – £100. Offers accepted. Lancs, Tim ☎ 01772 795837

■ **LAN cabinet** 2' x 2' x 4', metal construction, glass door with patch panels. £500 ono. Buyer collects Andy ☎ 0115 961 5781 (eves)

■ **Performa 5200**, printer, modem, software and manuals, one year old – £950 no offers. N. London area, Steven ☎ 0171 354 5578

■ **Performa 630 12/350**, 15-inch monitor, CD, TV/teletext video input, keyboard, manuals, software, CDs. One year insurance cover – £800. Reading ☎ 0118 9427531

■ **Apple 14-inch AV colour monitor,** brand new and un-used, complete with manuals and software – £200. Mac Plus, complete with keyboard, mouse, manual etc – £75. Performa 630 8/350, System 7.5.5, complete with manuals, new keyboard and mouse. Very light home use only. Mac Classic 4/fl complete with keyboard and mouse etc – £100. Mac LCIII 8/160, complete with manuals, keyboard and mouse – phone for details. ☎ 01582 570167 (after 6pm)

■ **StyleWriter**, colour, 2200, very good working condition, unwanted gift, quick sale required – £100. E London, Alex ☎ 0181 514 6765 or 0956 381718

■ **PowerMac 7200/90** 500Mb CD-ROM, 15-inch SFII Sony Trinitron display, Apple keyboard II, speakers, StyleWriter, mouse, manuals, loads of software, vgc – £1,400 ovno. Tim ☎ 01689 896893

■ **Syquest 44Mb**, excellent condition – £100 ono. Steve ☎ 01276 65569

■ **LCII, 12/80** plus CD-ROM drive with caddy note, CPU only, no monitor or keyboard – £300 ono. Morden ☎ 0181 646 7598

■ **PowerBook 180 (mono) 12/120**, perfect condition except broken back flap (port cover) – £500 ono. London, Martyn ☎ 0958 480430

■ **100MHz 601 microprocessor** from 7500/100 – £100. ☎ 0121 777 1537

■ **Performa 630, 12/350**, Apple 15-inch monitor, keyboard, mouse, TV card, video-in card, software, boxed, good condition with manuals – £600 ono. ☎ 01752 227717 (eves)

■ **Performa 475 12/250**, System 7.5.5, lots of software, all manuals, external D2 CD-ROM, 28.8 US Robotics, fax/modem, 14-inch monitor, mouse, keyboard – £850 ono. ☎ 01222 255926

■ **Performa 630 8/250** CD, 15-inch multi-scan colour monitor, StyleWriter 1200, lots of CDs, excellent condition-£950 ono. London, David ☎ 0966 258742

■ **19-inch monitor**, black and white, ideal for CAD work, large window, currently used – bargain at £300, incl. graphics card for 68K Apple. John ☎ 01797 363125

■ **Logitech three button mouse** with software, also PowerBook video cable. Any offers accepted. Niall (after 4pm weekdays) ☎ 01224 574811

■ **LCII 4/80**, HP DeskWriter 550C, 300e + CD-ROM, 14-inch monitor, keyboard, mouse, *RAM Doubler, ClarisWorks,* loads more software, cover CD-ROMs (lots!) – £600 ono. Derby ☎ 01332 299686

■ **PowerMac 8500/120**, keyboard, Kensington Turbo mouse, Apple Vision 17-inch monitor, StyleWriter 2500 colour printer, UMAX Vista S-12 scanner, vgc, hardly used. Quick sale required – ☎ 0370 682359

■ **PowerBook 5300C, 32/500**, System 7.5.5, software, AICK, books plus CD 600E 4x speed external CD-ROM drive, cables – £1,250 ono. ☎ 0171 229 9431

■ **Performa 475** CPU only – £200. ☎ 0171 603 7677

■ **Mac IIci 4/40**, 13-inch RGB complete system – bargain – £215. Mac IIcx 4/40 CPU only, working fine – £80. Martin ☎ 0161 740 5272 (eves)

■ **Mac IIvi 4/80**, keyboard, mouse, 14-inch colour monitor, HP DeskWriter, printer. Very good condition – £600 ono. S Bucks ☎ 01494 763774

■ **LCII 10/40** with CD300, StyleWriter, 14-inch monitor, keyboard, System 7.5.5 and software. Psion 3C also available.

User Groups

User groups are more or less informal clubs of people with a common interest – in this case, the Mac. If you don't have any Mac-owning friends, they are a great source of information, advice and hands-on-help help. Some groups simply meet every now and again; others are more structured and may even publish regular newsletters.

UK User Group Council list

The UK User Group Council maintains a list of the Mac user groups which have registered with it. If you wish to contact the council, call John McKnight on 0181 314 1753.

Local groups

■ **Aston University Mac UG**: Birmingham area. Contact Ray Tier on 0121 359 3611

■ **Berkshire Mac UG**: contact Ian Burn on 01734 813

■ **Blackburn Mac UG**: contact Roger Moreton on 01254 670043

■ **Cambridge Apple UG**: contact Ian Archibald on 01223 311157

■ **Cancer Research/RMH UG**: contact Raymond Henry on 0181 643 8901

■ **Cumbria Mac user group**: Monthly meetings, newsletter, training (at reasonable rates) and organised events such as the software sale to be held on 10 July 1997, at 6.30pm. For info, call or fax Linda Linsell, 01229 828422

■ **Gateway UG**: Norfolk area. Contact Verne Anderson on 01638 513000

■ **Glasgow Mac UG**: contact Stephen Broadfoot on 0141 339 6646

■ **London Mac UG**: contact David Thomas on 0181 306 2955

■ **Mac Assist**: Cardiff and district. Contact Nigel Arrighi on 01222 224682

■ **Midapple**: West Midlands. Contact William Watson on 01384 277921

■ **Midland Mac UG**: Worcestershire. Contact Ivan Knezovich, 01299 402631

■ **North West Apple CC**: contact George Evans on 01270 583714

■ **Norwich Mac UG**: Dave Gudgeon on 01508 492938

■ **Nottingham Mac UG**: contact David Nicholson-Cole on 0115 945 5077 or 0115 945 5444

■ **Poole Mac UG**: contact Bob Lister on 01202 684441

■ **S E Essex Mac UG**: contact Michael Foy on 01702 468062

■ **Southern Mac UG**: Salisbury area. contact Roger Ford on 01722 780102

■ **Southwest Mac UG**: contact John Elver on 01272 693119

■ **Staffordshire Poly Mac UG**: contact Mark Stiles on 01785 52331

■ **Sussex UG**: Hastings & E Sussex. Contact Garry Nevin on 01424 714110

■ **West Midlands UG**: contact Danny Torbica on 01902 336172

■ **Yorks & Humberside Mac UG**: contact David Vardy on 01423 358853

Thematic user groups

■ **BAPC (Printers)**: contact Derek

➤ page 140

User Groups continued

House on 01228 513621

- **Christian Mac UG**: contact Paul Wareing on 01789 490153
- **Corel Draw UG**: contact Jill Foster on 01509 415101 or 01509 620442
- **Developers UG**: contact John French on 01895 672654
- **HebreWare**: contact Mendy Scharf on 0181 802 6143
- **Helix UG**: contact John Sandell on 01763 273379
- **Independent School UG**: contact Ian Carter on 01252 512151
- **LAW Mac UG**: contact Charles Christian on 01379 88518
- **Lisa Users Group UK**: contact Sheila Bell on 01367 710453
- **MacBaud**: call 01685 58027
- **MacLaw**: contact Nicholas McFarlane-Watt on 01865 784777
- **Medical UG**: contact Keith Davey on 01836 348284
- **Microsoft UG**: contact 'Enquiries' on 01252 834995
- **Multimedia UG**: contact Richard Hurley on 01273 834588
- **Newton MessagePad West Yorks User Group**: David on 0113 278 0691
- **PageMaker UG**: contact David Foster on 01509 415101
- **QUAD Club (*QuarkXPress*)**: contact Philip Caplan on 0181 523 4233
- **School Mac**: Gloucestershire. Contact Bill Henley on 01453 825422
- **School Mac UG**: Cambridge. Contact Derek Smith on 01945 584146
- **Special Needs UG (SNUG)**: contact Geoff Hughes on 01744 24608
- **The British IIGS UG**: contact Peter Stark on 01223 838231
- **Young Mac**: call 01795 535472

Others

Advertise your user group here. It need not be registered, but must be a non-commercial user group – just send us your full details and we'll do the rest.

- **AppleEye BBS** (A FirstClass BBS) Modem numbers: 01234 822180 or 01234 826025. Address: PO Box 162, Oakley, Bedfordshire, MK43 7PA.
- **Artists archive and news service:** contact The Research Station on 0181 778 6547 (24 hours) 38.4bps plus Web site at **http://www.metamute.co.uk/**
- **Avid Mac user**, 14 year-old, would like to start user group with other teenagers in Hampshire and Surrey. Contact Kyle Alexander Productions "KAP". Call 01252 24207
- **MacLin, E-lans MUG**: for info call +46 (0) 141 220330 or e-mail: omar@motala.mail.telia.com
- **MacHelp**: non-profit helpbank for all Mac problems. Write to : MacHelp – Hermelynster 10, B2610, Wilryk, Belgium.

This listing is a free service for amateur, non-profit-making Mac user groups. MACFORMAT does not endorse or recommend any group and cannot be held responsible for any problems you might suffer as a result of contacting any of the groups listed here.

Call Phil for more info. ☎ 01745 826173

- **PowerBook 180** 8/120, System 7.5, *ClarisWorks 4* and more installed, internal modem, excellent condition, home use only – £650 ono. StyleWriter 1200 – £150 ono. ☎ 01505 703505
- **LCIII 4/160** CPU keyboard, mouse (no monitor). Light home use, boxed with manuals. Software and all leads. £300, Grantham ☎ 01476 572134
- **PowerBook 100, 2/40**, with internal fax/modem, spare sealed battery, £250. CD-ROM drive 300e, boxed, £70. Anna ☎ 0171 792 0374 or e-mail: a.alavi@eastman.ucl.ac.uk
- **PowerMac 7100/80** A/V 48/700 4x speed CD-ROM, System 7.5.5, mouse and extended keyboard, incl. Adobe Collection, home use, fully boxed, manuals – £745. ☎ 01892 863483
- **LC 630 12/350**, keyboard, monitor – £800 ono. Apple 320 LaserWriter printer – £380. Epson GT-8000 scanner – £440. Fargo FotoFun – £180. HP 660C printer – £170. Neil ☎ 0121 353 4446 (days)
- **Performa 5200 CD 16/800**, 15-inch monitor, StyleWriter 2400, all as new, boxed, all manuals, software, CDs. Home use only – £1,100. ☎ 01905 21172
- **PowerBook Duo 230 8/80**, floppy drive, adaptor – £400. Minidoc – £50. Docking Station – £50. Apple CD 300+ – £70. Professional Screen Filter – £40. ☎ 01225 464803 (answerphone)
- **Epson 500 printer**, new and boxed, superb 720dpi colour printer – £150. ☎ 01803 864033
- **Macintosh LC 10/40** only £250. Carmelo ☎ 0181 540 1052 or e-mail: cmanganaro@mdirect.co.uk
- **Performa 630 8/350** CD/TV video-in, keyboard, mouse, manuals, lots of software, boxed and all in excellent condition – £500 ono. Jon (eves) ☎ 01268 742499
- **Performa 630 8/500/CD** DOS card, *Windows 3.1*, 15-inch monitor, 28.8Kbps modem, CD-ROMs, manuals, boxed, can deliver – £600. Contact Mike (after 7pm) ☎ 01751 432319
- **Performa 6200 CD**, 14-inch monitor, 24/500, StyleWriter 1200, all disks and manuals. Stoke, Sean ☎ 01782 641512 (after 4pm)
- **Centris 660AV 12/230CD**, 16-bit sound and video input/output, Apple 14-inch Trinitron display, keyboard, mouse. Perfect condition, boxed, home use only – £550. Joe ☎ 01752 253327
- **Scanman** handheld scanner. Requires System 7 software – £50 ono. ☎ 01793 872282
- **Performa 630, 8/350**, CD/TV video-in, 15-inch M/S monitor, 28.8 modem, keyboard, mouse, lots of software, magazines – everything in excellent condition – £1,100 ono. Herts, Andy ☎ 01727 852836
- **MacLink** for Psion 3A with software, manuals, boxed – £50 ovno. Harlow, Ian ☎ 01279 639265 or e-mail: moff@netmatters.co.uk
- **Iomega external jaz drive** brand new sealed in box £299; 1Gb jaz carts brand new £55. Joe ☎ 0181 287 9722, e-mail 2hedz@netmatters.co.uk
- **Performa 630 20/350** CD/TV Vid in 15-inch multiscan monitor, keyboard, mouse. 500Mb ext hard drive, StyleWriter 2400 ex.condition. Boxed, many extras, £900 ono. ☎ 0121 689 1826
- **Microtec E3 scanner**, brand new, boxed, unregistered. *Color It!, OmniPage OCR, ScanWizard* software, Complete, unused, £250 including carriage. ☎ 01993 775179
- **Performa 630 20/500** CD, 15-inch colour monitor, keyboard, mouse. Only 15 months old, tons of software already loaded. Home use only. £1,150 Brian ☎ 0116 238 6506
- **Two 8Mb 72pin SIMM**. Original packaging. £30 each. Includes recorded delivery, fits LCIII, Performa 630 6200 etc. Logitech 32 greyscale handheld scanner, boxed. £45 ono ☎ 01476 572134
- **8Mb RAM** module for PowerBook 5xx series, £40 including fitting instructions ☎ 01483 562106 or e-mail j.h.benthall@herts.ac.uk
- **SyQuest 88Mb** external drive, SCSI cable plus 484Mb of SyQuest cartridges £100. Bournemouth ☎ 01202 667750 (day) 01202 251834 (eve)
- **Global Village Teleport 33.6 fax/modem**, boxed, hardly used, including all software, nearly new, will sell £70 ☎ 01263 588689
- **Performa 475 8/540**, mouse, keyboard, 14-inch monitor, CD-ROM, *ClarisWorks 2.1*, 28.8 fax/data modem and software – £1,000 ono. Three button Logitech mouse – £30. 8Mb DIMM – £30 ono. All in perfect condition. Call (6-9pm) ☎ 0181 771 8620
- **LCII** with Sonnet 040 50Mhz processor upgrade. Includes 14-inch Apple monitor, keyboard and mouse £550 ono. ☎ Karen on 01277 261820
- **Performa 6200 CD**, Internet ready 14-inch monitor, StyleWriter 1200, keyboard, mouse, manuals, microphone, fax/voicemail, internal modem. multimedia encyclopedia, *ClarisWorks, Myst,* several other CDs £950. Contact Louisa ☎ 0116 299 1587 (after 6pm)
- **Performa 5200** 6200 CD, includes System software. *SmartSound Showcase,* create customised professional quality soundtracks CD. Offers or will swap. Andy ☎ 01354 740800
- **A5 Wacom Artpad**, Ultrapen and Dabbler – unwanted, unused gift – £65 for the lot, complete with manuals. First come first served. Ali ☎ 0956 367108
- **Umax SV12 Pro flatbed scanner**, with transp. unit, SCSI cable, *VistaScan* software, *Photoshop* – full version, manuals. All new, unused. £500 ono. Liverpool ☎ 0151 525 2477
- **Performa 680 8/80** CD, monitor, keyboard, mouse, *ClarisWorks, FileMaker, Cubase, AudioMedia II, Sound Designer II,* 1Gb external drive. £800 ☎ Chris 01296 386043 or fax 01296 747709
- **PowerMac 8200 100/32**, keyboard, *Photoshop, Illustrator, QuarkXPress* and lots more. Apple Multiscan 1705, very minimal use. Bundle £1,700, ☎ Forah, 0181 292 7981 or 0958 532101 (mobile)
- **PowerMac 7200 8/500** CD. Seldom used, bought May 1996, boxed as new. Apple extended keyboard with "type-thru" cover, CPU and keyboard, £795. Possible delivery London, ☎ 0171 853 4316 (day), 0171 916 1710 (eves)
- **D2 88Mb SyQuest** drive plus three cartridges (88Mb). Hardly used as now have a bigger computer. £100 for quick sale. ☎ 0181 440 4827 or 0836 567401
- **Mac LCIII 12/80**. External Apple 4x speed CD-ROM. 14-inch Multiscan monitor, keyboard, mouse, System 7.5, manuals, disks. Contact Laurence ☎ 0181 892 9478 (eves)
- **SyQuest EZ135** external drive with nine SyQuest 135Mb removable hard disk cartridges and application utility software. £115, Mike ☎ 01347 810685
- **Performa CD/TV 12/500** CPU only mouse, keyboard, all books, software including *Quark 3.3, Photoshop 3* and lots more. Excellent condition £800, Dave ☎ 01132 713857 (after 6pm)
- **Performa 630 12/350**, 15-inch monitor, CD, TV/Teletext, Video Input, keyboard, manuals. Software includes CDs. One Year insurance cover. £800. ☎ 0118 942 7431
- **Quadra 800 40/230**, cache card, 24-bit video card, colour scanner, 8 x 10 Wacom tablet, 500Mb external hard drive £1,000. David ☎ 0171 580 8219 (day), 0171 326 0396 (eves)
- **Performa 6200 16/500** CD-ROM, Video-in, mouse, keyboard, *ClarisWorks,* extras and manuals. Used 12 months, as new. £650. Howard, ☎ 01295 256138

Software for sale

- ***FoxPro v 2.5***, boxed, complete – £40 incl. p&p or swap. *Think C* disks and manuals. Offers. S Wales, John (anytime) ☎ 01633 864672
- ***ISO Draw*** – professional, technical illustration program, boxed, with manuals. £1,750. Paul ☎ 01673 838634
- ***Dabbler*** – £20. *SmartSketch* – £20. *Ray Dream Designer* – £65. *F/A18 Hornet 2* – £30. *RAM Doubler* and *Speed Doubler* – £45. All boxed with manuals. ☎ 01229 583149
- ***XRes 2.0***, ready for upgrade, full version, not cross grade. Unregistered, all manuals and original box £125. Matt ☎ 0117 908 7664
- ***Ray Dream Designer 3.0*** (68K/P Mac) 3-D modelling package, boxed with original disks/manuals – £45. Also *Speed Doubler,* boxed – £25. Also various *Photoshop* books with CDs. ☎ 0115 970 0671
- ***Apple Magic Collection No. 2***, Disney interactive CD-ROMs, unopened – £50. ☎ 01858 469258
- ***Doom II***, brand new, unopened – £25 ono. ☎ 01222 598962 (after 5pm)
- ***Sage Sterling* CD** – £50. *Theme Park* CD – £25. *Cad Complete* (CD), Window and Mac USs – £20 ☎ 0171 586 4979
- ***Warlords 1*** – £8. *Leisure Suit Larry 5* – £8. You pay £1 extra for p & p. Simon ☎ 01703 234550 (eves)
- ***Canvas 3.5.5***, boxed, manuals – £200. *RSG 6,* boxed, manuals – £200. *Photoshop 3.0.5* CD/disk, manuals – £200. *Myst, 3D Atlas, GX Fonts,* others – £15 each. Ian ☎ 01279 639265 or e-mail: moff@netmatters.co.uk
- ***Marathon*** disk – £12. *Guinness Book of Records* – £7. *Tale of Benjamin Bunny* CD – £7. *10/10 Maths and English* – £5 each. Andy ☎ 01727 852836 (eves)
- ***Abuse***, *A-10 Attack, Monopoly, Doom II.* All games – £60. Contact Mick ☎ 00 353 87 230 5958
- ***Dogz***, *Myst* plus hint book, *Muppet Treasure Island, Daedelus Encounter, Alone in the Dark 1,2 + 3, Color It!* The lot for £80 ☎ Paul 01752 367536
- ***CodeWarrior*** *Discover Programming* for Macintosh. Full version on original CD inc. *C/C++, Pascal, Compilers,* Manuals on CD & registration card – £45 Call Patrick ☎ 01484 653174
- ***A-10 Cuba!*** – boxed £25. *Star Trek Final Unity* – £15 or both for £35. Contact Simon after 4pm ☎ 01494 485017
- ***Key ClipMaster Pro 5001*** image library on CD. Boxed with manual. CDs; *Myst, Asterix & Peanuts language*

learning. Makin Music, Rock & Roll, Concert Ware. £10 each one – ono. ☎ 01476 572134

■ ***Marathon 2*** and *Return to Zork* – boxed, as new – £20 each ☎ 01273 870467

■ ***PhotoFusion*** *Chromakey software 2.0.4.* This *Photoshop* plug-in creates stunning masks, accept £275 ono ☎ 0976 659721

■ ***Secrets of Luxor*** £25, *Shockwave Assault* £15, *WarCraft* and *Orcs/Humans* £15, all boxed Call Cindy, Suffolk ☎ 01394 283087

■ ***ClarisWorks v2*** boxed-set with full manual, disks, documentation, unopened discs. £20 plus p&p ☎ 01993 775179

■ ***Suitcase 2.1.4*** £20, *ColourStation Pro* £25, *Bitstream font packs 1/2* – £20, *Bitfolio World Maps* – £10, *Stuffit Deluxe 3.5* – £25, *Keycad 1.5* £20. Contact Mike, York ☎ 01347 810685

■ ***Astound 2.0*** boxed – multimedia presentation package. Never used, unwanted gift. Unregistered with manuals. £120 ☎ 01705 671330 or e-mail: john.w27@ukonline.co.uk

■ ***Microsoft PowerPoint v4***, boxed, unused, £100 ono. *Freehand 4.0* boxed £50 ono. *Theme Park* disks and manuals £10. ☎ John 01772 701990 (eves)

■ ***Adobe FreeHand v5*** complete – £75, *Connectix RAM Doubler v1* – £10, *Photoshop LE* CD-ROM – £25, *Mac Write Pro,* boxed and complete for £35. ☎ Hilary 01992 560338

■ ***SimFarm***, *SimCity 2000, Theme Park, Wolfenstein 3D* £15 each. All boxed with manuals. Plus *Poser,* boxed £80 ono ☎ 01223 312615

■ ***Marathon II*** on CD, new, still in original packaging. £20 including p&p. Phone after 7pm ☎ 01992 447534

■ ***M.Y.O.B ve6***, complete and unregistered. Will accept £130 Call Colin ☎ 0171 275 8292

■ ***Discworld*** £20, *Zork Anthology* £15, *Adobe Illustrator 5.5* £80. Plus manuals. *3D Atlas, Asterix* and *Peanuts language learning CDs* only £10 each. Contact ☎ Peter 01548 853356

■ ***Avid Videoshop 3.0*** CD and manual £50. ☎ Rick 0171 226 4450

■ ***NOW Utilities v.6.5*** on CD-ROM – £30 ono. Plus *Looney Tunes* screen saver with *After Dark* engine – great fun, £10. ☎ Chris on 01556 600211

■ ***Adobe PageMaker 5.0***, boxed with all manuals. Easily re-registered £99 ono. ☎ 0131 447 8624

■ ***Marathon*** CD £15. Plus *Daedalus Encounter, 3D Atlas, The Way Things Work, Learning Language With Asterix & Peanuts* and *Yearn2Learn* – £10 each. ☎ 0181 341 0700

■ ***Actua Soccer***, *Rebel Assault II* and *MacAlly* GamePad, all for bargain £50. ☎ Ross 0141 5561170

■ ***Extreme 3D***, unregistered, standard CD version with manuals, £285. StyleWriter II printer, excellent condition £80. ☎ Don 0410 940059

■ ***RAM Doubler 2***, *Speed Doubler, Fax STF3, Ray Dream Designer 3, Jag II, Indycar II,* Monotype font bundle. All boxed, legal and unregistered. £120 for bundle. Call Steve ☎ 0181 948 2405

■ ***Photoshop 3.05*** – £85. *Encyclopedia of Science* £15. *Alley 19 Ten Pin Bowling* CD game £15, 4Mb 72pin SIMM £15. Colin ☎ 01342 715434

■ ***Illustrator 6*** Delux CD, *Photoshop 3* Delux CD. Both with *Pagemaker 6* CD, System 7.5 *Internet Connection Kit,* boxed. *MS Office, Quark 3.1,* System 7.5 boxed. £offers for each or all. Benfleet ☎ 01702 551258

Wanted

■ **Carry case** for my beloved Mac Classic, must be in good roadworthy condition. Reasonable price and postage paid. Answerphone, please leave a message ☎ 01225 481386

■ ***Lightwave 3D*** for PowerMac with manuals. ☎ 0171 477 2598

■ **S.O.S! –** I lost my *ClarisWorks 2.1.* I have manuals and registration, but no disc, it came pre-loaded. Please help. Salisbury, John ☎ 01722 337876

■ **DayStar 100 MHz Powercard 601** for Performa 630. ☎/fax 00 55 11 203 5953 or e-mail: ruppert@sanet.com.br

■ ***QuarkXpress***, *Photoshop, Illustrator* software desperately needed for student on DTP course. Barry ☎ 01869 322372 (before 9pm)

■ **Original 128K Mac.** ☎ 0121 777 1537.

■ ***Alias Sketch*** (Power Mac) v 2.0 or higher with original disks, CD and manuals. Norway ☎ 00 47 22 14 89 00 or e-mail: rsrform@idgonline.no

■ ***Secret of Monkey Island***, v1 or 2. But 3.5-inch disc only please. Sussex ☎ 01444 236714 (eves)

■ **Express modem** software disks for PowerBook 540c including install and OCR disk. ☎ 0171 223 0935

■ ***ClarisWorks*** or equivalent package, suitable for PowerBook 160, also *RAM* or *Disk Doubler.* Mike ☎ 01785 252559 (eves) or 01902 715847 (days)

■ **Cheap Modem**. S Wales, John ☎ 01633 864672

■ ***Red Baron Flight SIM*** for Mac wanted, prefer with manuals. David ☎ 0181 747 3754

■ ***Office 4.2.1*** full version.Contact Gerry ☎ 01232 763858

■ **PowerBook 165c or 180c**, preferred with FPU, will pay £600, plus will travel for it. Chris ☎ 0116 299 1879

■ **PowerBook Duo 270c** for spares. I require a screen and external Apple DAA box for Supra Express modem ☎ 01257 412868

■ **Williams' *Defender*, *Joust*, *Robotron***, and any others I may have missed. Julian ☎ 01227 275120 or 01227 262703.

Swap shop

■ ***Wolfenstein*** *Second* and *Third Encounters* for *Civilization.* Also swap *Monkey Island* plus £5 for *Monkey Island 2.* Chris ☎ 01727 852890 (eves)

■ **Performa monitor**, two 4Mb SIMMs memory, Mac keyboard, *ClarisWorks 3.0,* HD, System 7.5.3 and 7.5.5. CD-ROMs plus SPSS software. Exchange for Mac items including 475 NuBus card. Contact ☎ 0181 470 7025 (after 6pm)

■ **Macintosh LC 10/40** swap for Newton 120. Carmelo ☎ 0181 540 1052 or e-mail: cmanganaro@udirect.c.uk

■ ***Now Utilities 6.0*** CD-ROM and *SoftPC Professional* (suit 68K Mac). Open to offers, but would like *MS Office 4.2.1* or OCR software ☎ 01232 763858

■ **Swap *Shockwave Assault***, *WarCraft, Orcs/Humans, Dungeon Master II* for *Dark Forces, Prince of Persia* collection and *Theme Park.* Contact Cindy, Suffolk ☎ 01394 283087

■ **LaserWriter IIG**, 4Mb and SyQuest 44Mb with one cartridge, swap for early PowerBook and colour Inkjet printer – may split. Essex ☎ 01702 420397

■ **Apple external tape streamer** 40Mb with three tapes. Swap for colour QuickCam or any suitable hardware. ☎ (after 6pm) 0121 242 5185

■ **Swap *Quark* Extensions**. Contact Chris, e-mail procorp@iafrica.com

■ ***Macromedia Freehand Graphics Studio v2*** CD-ROM, will exchange for *SoftWindows 95,* v4 preferred, for PowerMac. Anna ☎ 0191 284 5456 or e-mail n3387915@burnmoor.ncl.ac.uk

Books and magazines

■ **MacFormat issues** 1-26, The Mac issues 1-7, MacUser November 1991 to July 1994, total of 124 magazines. £50 plus p&p ☎ 0121 311 1892

■ **IIcx Owners Guide**, 156pp as new (1989) £6 inc p&p ☎ 01993 775179

Help wanted

■ **Hi! Could you be my penfriend?** I'm a 15 year-old boy – if you're a British teenager, write to: Mikko Toivanen, Kylanmaki 226, 49640 Paijarvi, Finland.

MacFormat Reader Advertisement Form

Name .....
(Not for publication)

Address .....

.....

.....

.....Post code .....

Telephone .....

Date .....

Category

Hardware for Sale ☐
Software for Sale ☐ Wanted ☐
Swap Shop ☐ Contacts ☐
Help Wanted ☐ Fanzines ☐

User groups New entry ☐
Updated entry ☐

For your free advert, please use this coupon or a photocopy. Only the words in the squares will be printed – use one square for each word and remember to include your contact phone number!

All ads are accepted in good faith. MacFormat can't guarantee insertion in a particular issue, and reserves the right to refuse or edit any ad. We can accept no responsibility for typographical errors or any losses arising from the use of this service.

Private advertisers only. Trade ads will not be accepted, including anyone advertising the sale of shareware or PD software.

MacFormat is not a forum for selling pirate software. If you are selling software, you must include a signed statement that you are selling the original issue disks and including all original manuals and documentation, and that you have not retained any copies of the software.

I have read and understood the conditions for the inclusion of my free reader ad.

Signed .....

Send your form to: MacFormat Reader Ads, 30 Monmouth Street, Bath BA1 2BW.

Back Issues

Complete the set – only £5.00 each, including postage and packing.

Issue 52 – July 1997

Double-CD special!
CD-ROM: *RedShift* complete; *FA/18 3, Fallout, Spreadsheet 2000* demos.
Disk: *Grid Warrior, ClipDragon, Clip-Append, MineSweeper Pro*
Inside: Definitive upgrade guide; music multimedia; "home DTP" suites.

Order codes:
CD-ROM **MFCD52**
HD Disk **MFHD52**

Issue 51 – June 1997

100-page System Folder book!
CD-ROM: Demos of *Virtual Pool, 3D Ultra Pinball 2, Conflict Catcher 4.*
Disk: *Bill The Demon, The InformInit 1.3, ExAminer 1.4, PrefKiller 1.0.*
Inside: Computer animation; *Light-Wave, Command & Conquer* reviews.

Order codes:
CD-ROM **MFCD51**
HD Disk **MFHD51**

Issue 50 – May 1997

Triple-CD special!
CD-ROM: AOL disc, 50 hours on-line free (UK only); *Color It 3.0.4LE* complete; *Command & Conquer, Poser 2.01, Cinema 4D, Cubase VST* demos.
Disk: Sorry, floppy edition sold out
Inside: Apple today and tomorrow, 50 Macs, System 7.6, *PageMaker 6.5.*

Order codes:
CD-ROM **MFCD50**

Issue 49 – April 1997

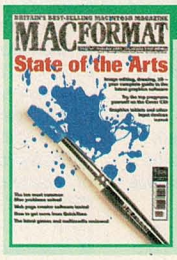
Double-CD special!
CD-ROM: *PageStream 3.2LE* complete; *Expression, Hind, Nisus 5* demos.
Disk: *Xenia, Smart Scroll, File Buddy.*
Inside: Component software, up-grading memory, *Canvas 5,* Fractal's *Expression, Speed Doubler 2.*

Order codes:
CD-ROM **MFCD49**
HD Disk **MFHD49**

Issue 48 – March 1997

CD-ROM: *Claris Emailer* complete, demos of *QuarkImmedia, Caesar II, Nightingale, Jungle Activated!*
Disk: *CopyPaste, NS-Shaft* game, *MouseClick.*
Inside: Your Mac knowledge tested, removable storage, *Immedia* review.

Order codes:
CD-ROM **MFCD48**
HD Disk **MFHD48**



Issue 47 – February 1997

Double-CD special – very few left!
CD-ROM: *xRes 2.0 SE;* demos of *Picasso, Nascar Racing, Close Combat, Sheila Rae, mTropolis, golive.*
Disk: Sorry, floppy edition sold out
Inside: Art software; input devices; ten top Mac problems solved; Web page creators and HTML editors.

Order codes:
CD-ROM **MFCD47**

Issue 46 – January 1997

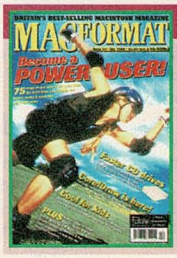
CD-ROM: *Media Paint, Actua Soccer, Marathon Infinity* and *ClickWorks* demos. Full *Internet Explorer 3.0.*
Disk: *Pacman; DiskList; Malph.*
Inside: Best products of 1996; The Mac in '97; PC-compatibility solutions; *Fractal Detailer;* Software RAID.

Order codes:
CD-ROM **MFCD46**
HD Disk **MFHD46**

Issue 45 – Christmas 1996

Free MacGamer supplement!
CD-ROM: 120Mb of video: clips, demos and utilities; *WarCraft II, Worms, Future Splash* demos.
Disk: *QuickEditor, Aaron, Bert.*
Inside: Pros' video secrets; graphics cards; *3D World 2;* PowerBook 1400.

Order codes:
CD-ROM **MFCD45**
HD Disk **MFHD45**



Issue 44 – December 1996

Double-CD special!
CD-ROMs: Sorry, CD edition sold out – try fax-back service for articles!
Disk: *InformInit; MacWorm; FreeRam.*
Inside: 75 ways to get more from your Mac; how to choose a CD drive; *CorelDraw* arrives on the Mac; Gil Amelio interview; flat panel monitors.

Order codes:
HD Disk **MFHD44**

Priority Order Form

Description	Order code	Quantity	Price
		TOTAL £	

MacFormat Reader Offers, Future Publishing Ltd, FREEPOST (BS4900), Somerton, Somerset TA11 6BR
(No stamp required if you are posting from within the UK)

Method of payment ☐ Visa ☐ Access ☐ Cheque (£ Sterling)

Card no. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Expiry date.....

Signed..... Date.....

Please make cheques payable to **Future Publishing Ltd** and return with this form to the Freepost address above

Title..... Initials..... Surname.....

Address.....

.....

.....

Postcode..... Daytime tel no.....

EEC customers registered for VAT must quote their registration number when ordering

VAT number.....

Overseas readers: for delivery charges, phone +44 1225 822510 or e-mail subs@futurenet.co.uk

☐ Tick if you don't want to receive details of other special offers

Your order will be processed immediately, but please allow 28 days for delivery

Issue 43 – November 1996

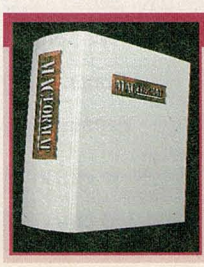
CD-ROM: *Marathon Infinity, Abuse, Director, Authorware, Muppets, Origins of Mankind* demos; artificial life suite.
Disk: *Snood* game, *MacTypingTutor.*
Inside: Artificial life; word processing vs DTP; storage media group test; *RAM Doubler 2, Overdrive* reviewed.

Order codes:
CD-ROM **MFCD43**
HD Disk **MFHD43**

Issue 42 – October 1996

CD-ROM: *Bryce 2; Descent 2; QuickTime 2.5;* science demos.
Disk: *Bricks* building sim; *Super Carz; StartUpScreenManager.*
Inside: Definitive Mac and clone round-up; e-mail packages; *Infini-D 3.5; IndyCar Racing 2;* science CDs.

Order codes:
CD-ROM **MFCD42**
HD Disk **MFHD42**



MacFormat Binder

A design classic at £6.50, the MacFormat binder not only keeps your issues in perfect condition, but also looks a treat on your bookshelf. Order a binder for yourself now! Alternatively, get one FREE when you buy any five back issues of MacFormat.

Binder Price: **£6.50**
Order code: **MFBIND**

Fax-back

Is the back issue you're after sold out? Did the dog eat your prized MACFORMAT collection? Fear not! Help is at hand with our new fax-back service. Just call us on your fax machine, key in the code for the article you want, and it's faxed right back to you automatically.
(Note that you need a combined phone/fax)

1. Dial **0891 154662** and wait for a fax check.
2. Then key in the **three-digit code** for your chosen feature.
3. Press Start/Send to receive the fax-back.

Product reviews		Code
PowerBook 1400	MF45	001
Photoshop 4 & alternatives	MF47	002
FreeHand 7 & alternatives	MF47	003
Apple MessagePad 2000 & 130	MF48	004
CorelDraw 6	MF44	016
Hitachi 17MVXv2 monitor	MF44	017
Canvas 5	MF49	023
Fractal Design *Expression*	MF49	024
Speed Doubler 2	MF49	025

How-to's		
Handling foreign graphics formats		
Part 1: first steps	MF40	005
Handling foreign graphics formats		
Part 2: converting formats	MF41	006
Handling foreign graphics formats		
Part 3: which software?	MF42	007
Create a duotone in *QuarkXPress*	MF45	008
Relational database basics	MF44	018
Using relational functions in *FileMaker Pro 3*		
Part 1:	MF43	019
Part 2:	MF44	020
Memory: how it works, how to upgrade it	MF49	026

Group tests		
Storage devices	MF43	009
Buying a CD-ROM drive	MF44	010
PC emulation	MF46	011
Input devices	MF47	012
3D software overview	MF47	013
Removable storage	MF48	014
Storage basics	MF48	015
Choosing a printer	MF44	021

Features		
Gil Amelio interview	MF44	022

Fax-back calls cost 50p per minute at all times. It takes between two and eight minutes per page, depending on the quality of the phone line, specifications of your fax machine, and the number of photographs on a page.

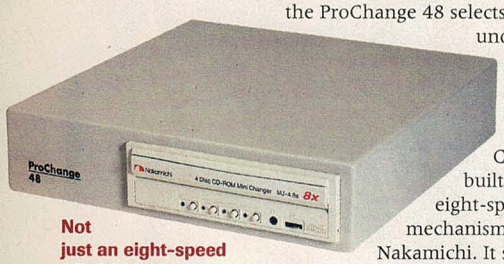
The Practical Yachting Magazine
Sailing TODAY
Issue 3 on sale now
Come aboard!
For all practical sailors! Sailing Today will help you and your family get the most out of sailing for the least cost. Written by sailors for sailors, it's the only magazine you'll need
£2.60 cover price

Winners

Announcing the lucky winners of recent competitions...

Back in MACFORMAT 47, we gave you the chance to win one of two Formac Pro-Change 48 CD-ROM drives – but they're not just ordinary CD-ROM drives. No, the ProChange 48 is an eight-speed *four*-CD drive!

That's right: the drive holds up to four CDs at once, and can automatically swap between them – you can have an icon for each one on your Desktop, and when you double-click on the one you want, the ProChange 48 selects it, shuffles it under the read/write head and accesses it for you.



Not just an eight-speed CD-ROM drive – the Formac Pro-Change 48 is a veritable CD jukebox!

The Pro-Change 48 is built around a fast eight-speed CD mechanism made by Nakamichi. It sells for about £470 and is brought to you by Formac, a UK company which specialises in the latest quality technology in the graphic card, monitor and data storage markets at excellent value prices.

The two lucky winners drawn from the bulging cardboard box are Miss Valerie Sisson of Alfreton in Derbyshire and Mr I Parkin of York. Congratulations to both – your prizes are on the way! **MF**

It's better to talk – the Tiny Zone!

Hello and welcome again to Tiny Zone, the section of MACFORMAT that's really in touch... There's one big problem with this Internet stuff, you know, and it's this: computers have no patience. No, really. You see, if you make a phone call to your Mum in Australia, say, and get a dodgy connection or one of those lines where you hear an echo of your own voice as you speak, you either put up with it (what do you expect over that distance anyway?) or you say "This is a terrible line, Mum, I'll call you back." But what does a computer do? Odds are, it gets all huffy and whinges about "checksum errors" or "time-outs". If you call your sister in the States, you don't expect her to get out of the shower, make her way across the house and pick up the phone in less than... what, seven or eight rings? But what does a computer do if a server doesn't connect after four rings? It gets fed up, that's what, and grumbles "Error 404 – couldn't connect". So it's all well and good Microsoft spending millions to persuade people to "Get on the Net": what they need to do is persuade computers to chill out and learn patience. That's the key to the Net. Just ask anyone who's already connected and ever tried to access a popular Web site or download a graphic-rich page...

How to contact MACFORMAT

Editorial enquiries

MACFORMAT, Future Publishing Ltd,
30 Monmouth Street, Bath BA1 2BW.
Tel: 01225 442244, fax: 01225 446019
E-mail: macformat@futurenet.co.uk
Web site: MACFORMAT is on-line as part of FutureNet. Accessing it is free (except for your phone bill, of course) – point your World Wide Web browser at: **http://www.futurenet.com/**
AOL: MACFORMAT also has its own area within AOL in the UK – go to keyword **MacFormat**

Sending us a letter?

Send your letters to the address above – the shorter they are, the better their chances of being printed. E-mail letters are welcome too – please put "Apple Talk" in the subject line. If you'd like a letter included in the Readers' Corner on our Cover CD-ROM, make sure it contains no defamation or obscenity, then send it in as a *SimpleText* document (so anyone can read it!) on a disk marked "MACFORMAT Readers' Corner". Make sure you include your name and address, and note that we can't return your disk.

■ If you send us a fax, please write "MACFORMAT" prominently at the top so that our receptionists know which of Future Publishing's 50 magazines to forward it to.

■ The legal stuff: all correspondence sent to our editorial address will be considered for publication unless you specifically state otherwise, and we reserve the right to edit letters for reasons of space, clarity or legality. By writing to us, you agree to assign all copyright in your letter to Future Publishing Ltd and its licensed agents worldwide, so we can translate it for our Taiwanese edition next year... if it's good enough. And no, you can't have it back afterwards.

Problems or questions?

■ Sorry, but we cannot give personal help with technical problems or buying advice, whether by phone, fax or e-mail. If you have an urgent problem with a new Mac, try the Apple Assistance Centre on 01753 615999.

■ We try to make ourselves available to answer Cover Disc related and general reader calls on Wednesday afternoons from 2pm to 6pm, so please ring then if you have to. We cannot answer technical queries over the phone – sorry! We hope you'll understand that because we receive so much correspondence we can't promise to reply to faxes, e-mail or mail personally, even if you include an SAE. However, rest assured that we do read all correspondence we receive.

Advertising enquiries

Helen Watkins on 01225 442244

Subscription enquiries

(If enquiring about an existing subscription, mention your subscription number – it's the one starting with "Q" – and the address)
Subscriptions, Future Publishing Ltd, FREEPOST (BS4900), Somerton, Somerset TA11 6BR
(No stamp needed if posted in the UK)
Subs tel: 01225 822510 (8.45am–4.30pm)
Subs fax: 01458 274378 (24 hours)
Subs e-mail: subs@futurenet.co.uk

ABC **MACFORMAT'S circulation is independently audited by the Audit Bureau of Circulations**
Average circulation per issue, July–Dec 1996
43,680

Editorial

Editor Alex Summersby ■ **Deputy Editor and News guru** Richard Hill ■ **Operations Editor** Cathy Parnham ■ **Production Assistants** Clare Lydon, Emma Parkinson, Clare Johnson ■ **Disc Ed** Brian Smith ■ **Technical Writer** Lindsay Bruce ■ **Editorial Assistant** Jane Bentley ■ **Contributors** James Ashton, Josse Bilson, Jim Chandler, Jonathan Ferman, Dave Golder, Rod Lawton, Linda Plain, Matthew Richards, Ed Ricketts, Nic Rodgers, Derek Smith, Ian Waugh, Garrick Webster, Richard Wentk

Art

Art Editor Mark Nottley ■ **Deputy Art Editor** Nick Aspell ■ **Photography** David Benson ■ **Pagehead cartoons** Willie Ryan ■ **Cover image** Telegraph Colour Library; photographer: Paul Terpanjian

Advertising (01225 442244)

Senior Ad Sales Exec Helen Watkins ■ **Classified Ad Sales Exec** Jacqui Russell ■ **Production Coordinator** Rebecca Stables ■ **Ad Design** Cherry Coad

Publishing

Publisher Jane Ingham

MACFORMAT on-line

On-line Editor Ed Haynes
e-mail **ehaynes@futurenet.co.uk** *or* **macform@aol.com**
Get connected! Use the AOL software on MACFORMAT 50's CD (and a modem or other connection, of course) to check out our area-in-progress and let Ed know what you think!

Pre-press, scanning, imagesetting

Jon Moore, Brian Hook, Jonathan Wakeham, Richard Davies, Neil Owen, Jason Titley, Simon Windsor, Tim Peel, Liz Cheney, Mark Gover, Oliver Gibbs, Brett Caines

Systems

Avi Abadi, Christian Goddard, Nick Harvey, Derek Smith, Jansen Dennett, Andrew Dellenty, Sue Burn

Future Publishing Ltd

Managing Director Greg Ingham ■ **Group Ad Manager** Simon Moss ■ **Marketing** Gill Stevenson, Simon Howarth, Simon Steele, Georgina Saunders ■ **Computing Division Production Manager** Richard Gingell ■ **Assistant Production Manager** Charlotte Brock

Pearson New Entertainment

Chairman Nick Alexander ■ **PR and Publicity** Liz Ramsay, Jenny Press, 0171 331 3920 ■ **Overseas licensing** If you are interested in licensed re-publication of this magazine (or any part of it) overseas, contact Katie Cunningham, phone +44 171 331 3920, fax +44 171 447 3499, e-mail **kcunningham@pne.co.uk**

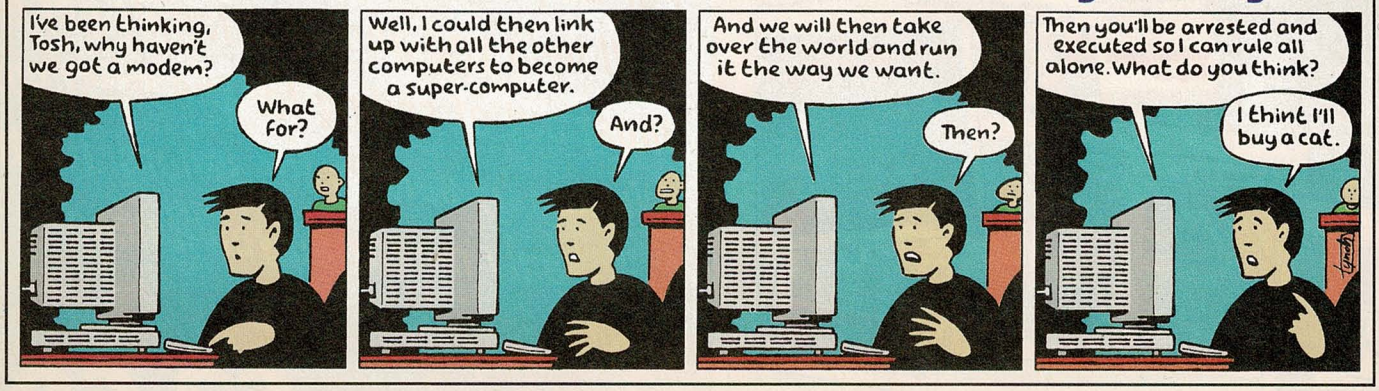
Printed in the UK by Southernprint Ltd, Poole, Dorset

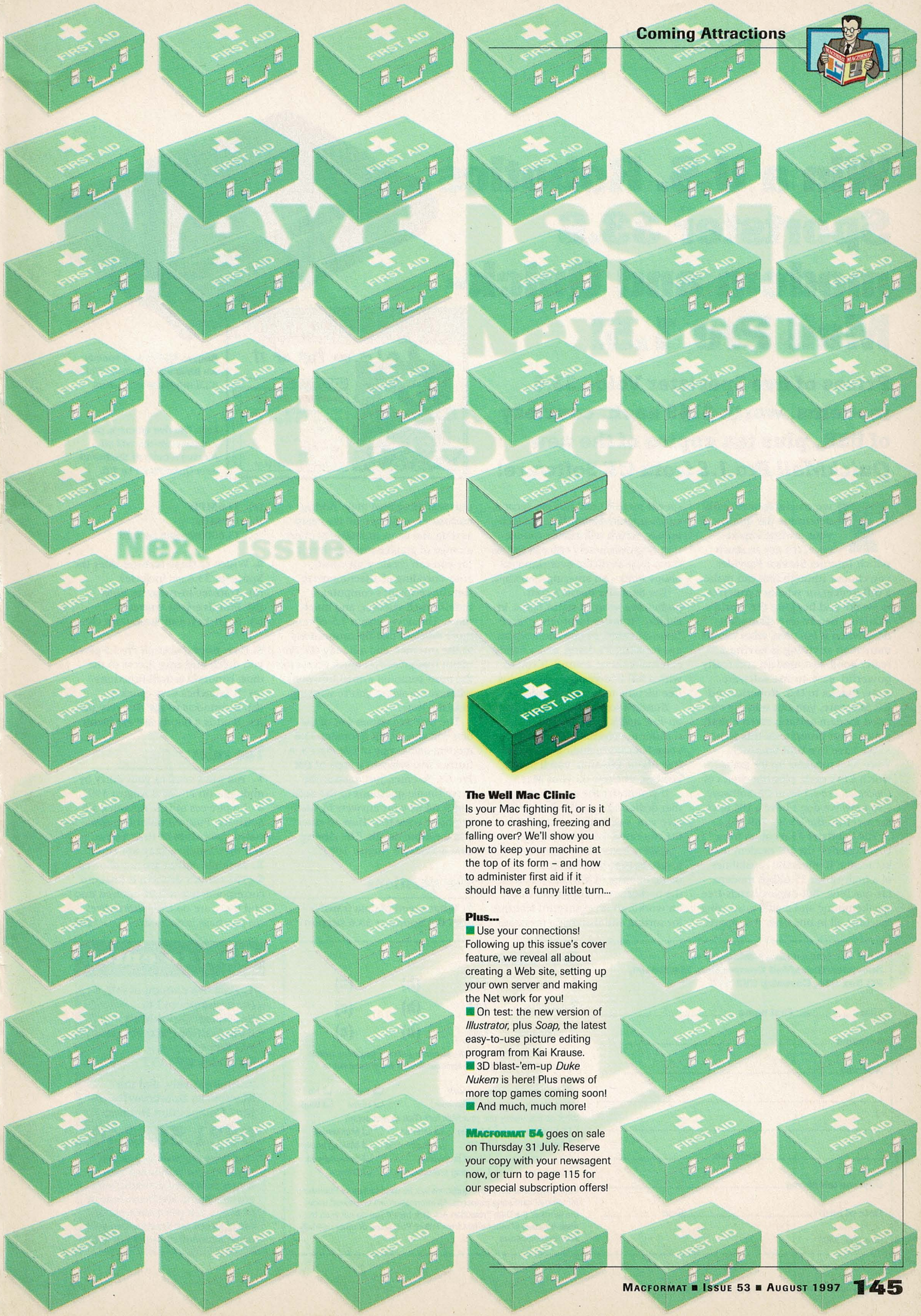
■ MACFORMAT welcomes contributions for publication but we regret we cannot return them. Submissions are accepted on the basis of full assignment of copyright to Future Publishing Ltd, *unless* otherwise agreed in advance and in writing. We'll assume that all correspondence is for publication (on the basis of full assignment of copyright) and that all CD-ROM demos or readers' submissions may be incorporated on a Future Cover Disk/CD-ROM unless you expressly say otherwise in writing. We reserve the right to edit letters or other contributions for reasons of space, clarity or legality.

■ MACFORMAT is an independent journal, not affiliated in any way with Apple Computer, Inc. The Apple logo is a registered trademark of Apple Computer, Inc. 'Apple', 'Macintosh', 'Macintosh Performa', 'Power Macintosh', 'Mac' and the Mac and Mac OS logos are trademarks of Apple Computer, Inc. All trademarks and copyrights in this issue are recognised, and are acknowledged where possible. If we have failed to credit your copyright, please contact us – we will be happy to correct any oversight.

Mac and Tosh

by Bob Lynch


I've been thinking, Tosh, why haven't we got a modem?
What for?
Well, I could then link up with all the other computers to become a super-computer.
And?
And we will then take over the world and run it the way we want.
Then?
Then you'll be arrested and executed so I can rule all alone. What do you think?
I think I'll buy a cat.



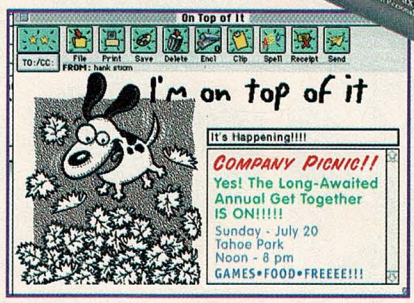
The Well Mac Clinic
Is your Mac fighting fit, or is it prone to crashing, freezing and falling over? We'll show you how to keep your machine at the top of its form – and how to administer first aid if it should have a funny little turn...

Plus...

- Use your connections! Following up this issue's cover feature, we reveal all about creating a Web site, setting up your own server and making the Net work for you!
- On test: the new version of *Illustrator,* plus *Soap,* the latest easy-to-use picture editing program from Kai Krause.
- 3D blast-'em-up *Duke Nukem* is here! Plus news of more top games coming soon!
- And much, much more!

MacFormat 54 goes on sale on Thursday 31 July. Reserve your copy with your newsagent now, or turn to page 115 for our special subscription offers!

Win a U.S. Robotics Sportster 33.6 modem and Quick-Mail Pro 1.5!



Above: Stylish and speedy: we have five Sportster Voice 33.6 modems to be won.

Left: The five winners, plus five runners-up, will all receive a copy of the brand new *QuickMail Pro 1.5.*

Prizes of five Sportster Voice 33.6 modems, worth £149 each, courtesy of USR, plus ten copies of the new *QuickMail Pro 1.5* from CE Software!

Two crucial factors really determine the quality of your on-line experience. It's not so much which Internet Service Provider you choose (though that can make a difference), or whether America is awake and hogging the world's available bandwidth (though it does when it is)... No, what counts more than anything is having a really good, fast modem and really powerful, easy-to-use software. Now, thanks to U.S. Robotics and CE Software, you can win the top-rated modem and top-rated e-mail suite in our group tests this issue!

We have five USR Sportster Voice 33.6 modems up for grabs, worth £149 each, plus ten copies of *QuickMail Pro 1.5* from CE Software – so new, we don't have a UK price for it yet (in the US it's $69.95).

The Sportster 33.6 comes from U.S. Robotics, the UK modem market leader. It offers the capabilities of a high-speed 33.6Kbps modem, fax machine, full-duplex hands-free speakerphone and digital answering machine all in one unit. It supports speeds up to 33,600 bits per second, and is upgradable to USR's x2 technology, which will enable connection at speeds nearly twice as fast as those now available over standard phone lines – an amazing 55.6Kbps.

The Sportster boasts a comprehensive array of status lights, including "transfer-in-progress" and "auto-answer", so you can keep an eye on what it's doing, and a handy external volume control. It comes with a full five-year warranty, plus free lifetime technical support.

Bundled software covers all your on-line needs from fax and data transfer to voicemail. (To use all the voice features including the hands-free phone function, you'll need a headset, or a mic on your Mac.)

If you prefer the extra features that dedicated e-mail software can give you, you might want to add the top-rated *QuickMail Pro 1.5.*

QM Pro boasts an elegant, easy-to-use button-based interface, automatic filtering of incoming mail (in the background, so you can carry on working!) and powerful features for sorting and managing messages, plus searching filed mail. Adding enclosures or filing mail is as easy as drag and drop, and *QM Pro* offers a range of graphic message forms (or you can create your own!), auto-encoding of attachments to suit the recipient's computer, a built-in spell-checker, and much more. The new version 1.5 offers more efficient dial-up connections to the Internet, and a handy *QM Pro* menu that gives you quick access to the most common e-mail functions, whatever program you're working in at the time.

The first five names out of the box will win a USR Sportster 33.6 modem *and* a copy of *QM Pro 1.5.* A further five will win a copy of *QM Pro 1.5.* To enter, just answer the three simple questions to the right and send us your answers by mail or phone – see the "How to enter" box for more details. The closing date is Friday 8 August 1997.

The questions

1. What speed of data transfer does the Sportster 33.6 support?
(a) 33.6MPH
(b) 149MHz
(c) 33,600 bits per second

2. Which of these features does the Sportster 33.6 *not* include?
(a) Transfer-in-progress light
(b) Full five-year warranty
(c) Built-in tea-maker/alarm clock

3. How does *QuickMail Pro 1.5* give you quick and easy access to the most common e-mail functions?
(a) It launches very quickly
(b) It connects to the Net very fast
(c) It adds a handy *QM Pro* menu

The rules

1. You must send us your entry by midnight on Friday 8 August 1997.
2. Employees of U.S. Robotics, CE Software, Future Publishing, associated companies or their agents, and their families, may not enter.
3. Multiple entries are not allowed.
4. The editor's decision is final, no correspondence will be entered into and there are no cash alternatives. No purchase is necessary. **MF**

Send this coupon (or a photocopy) to: Sportster/QuickMail Competition, MACFORMAT, PO Box 494, Coventry CV3 1YT

Title ..... **First name** .....

Surname .....

Address .....

.....

.....

..... **Postcode** .....

Daytime telephone .....

Date of birth ..... **Sex:** .....

Mag code: MCF

Your answers

1 (circle one) **(a)** **(b)** **(c)**
2 (circle one) **(a)** **(b)** **(c)**
3 (circle one) **(a)** **(b)** **(c)**

To help us improve MACFORMAT, please answer the questions below. You will be entered in the competition even if you choose not to answer them.

Do you subscribe to MACFORMAT? ❑ Yes ❑ No
Where do you use a Mac most often? ❑ Home ❑ Work
What do you mainly use your Mac for? (Tick all that apply)

❑ Education ❑ Games ❑ Internet ❑ Multimedia
❑ Art/design ❑ DTP ❑ Accounting ❑ Making music
❑ Programming ❑ Word processing ❑ Spreadsheets
❑ Databases ❑ Creating presentations ❑ Other

Your answers to the above questions will be used by Future Publishing for internal marketing purposes. All information will be treated under the terms of the Data Protection Act. Tick here if you do not wish to receive details of other offers from Future Publishing or other carefully selected companies. ❑

How to enter

1. Post the coupon at left (or a photocopy) to: Sportster/QuickMail Competition, MACFORMAT, PO Box 494, Coventry CV3 1YT

2. Alternatively, dial the MACFORMAT Sportster/Quick-Mail Competition Hotline:

0891 553340

(The lines are open 24 hours a day, and your call should take no longer than three minutes. Calls are charged at 50p per minute at all times. You will get the opportunity to opt out from having your name included on a mailing list.)

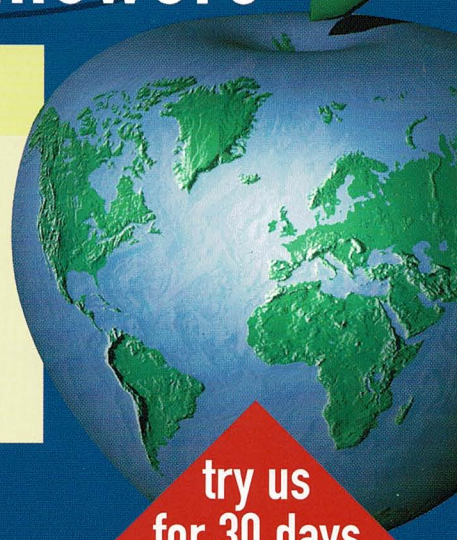
ONLY £10 per month*

If you're after an internet access provider that's mac friendly

NetMatters has the answers

- 100% UK coverage at local call rate
- Mac & Windows fully compatible
- no on-line charges
- free internet software CD-Rom
- 33.6K modems (15:1 ratio)
- free 5Mb of web space
- web page design & storage
- ISDN & leased line access
- free technical support 7 days a week

service type	email boxes	set-up charge	monthly subscription	annual subscription
modem dial-up	1	£12	£10	SAVE £20
modem plus dial-up	5	£15	£12	SAVE £24
ISDN dial-up	1	£20	£20	SAVE £40
ISDN plus dial-up	5	£25	£25	SAVE £50
networked ISDN	10	£95	£75	SAVE £75
leased line 64k	50	POA	POA	POA



try us for 30 days absolutely FREE*

NetMatters
The Service Provider

*Price excludes VAT

NetMatters is a division of Graphics Matter Ltd.

call 0345 57 33 77

info@netmatters.co.uk http://www.netmatters.co.uk

Ring us between 8:00 am & 6:00pm

There can be only ONE!

ART CRASH, Germany

Call for free catalogue:
01223 507 705
01223 507 711

NEW

ONE 4.0 GB external DAT drive with Dantz Retrospect and 1 DAT tape
£577 (£678)

ONE 2,6 GB external MO drive
£885 (£1,040)

ONE 2x/6x external CD-Recorder incl. CD-writable and software Toast Pro 3.0
£319 (£375)

Bundle incl. 12 original Kodak CD-R with InfoGuard (£417)
£355

ONE 1,0 GB external JAZ drive incl. 1 cartridge
£275 (£323)

ONE 640 MB external MO drive
£333 (£391)

ONE 2,0 GB external hard drive
£222 (£261)

Tested in the German c't number 8/96:
"At present the most attractive equipment. On test it is clearly the fastest and moreever the cheapest you can get."

MacFormat June 1997:
"A solid drive in terms of build and performance, at a very competitive price."

MAC & PC

Internal hard disks from ONE Technologies

Capacity	Interface	Access Time	Price	Price incl. VAT
2,000 MB	SCSI-2 FAST	8.7 ms	£195	(£229)
3,000 MB	SCSI-2 FAST	9.8 ms	£244	(£287)
4,000 MB	SCSI-2 FAST	8.1 ms	£399	(£469)
4,000 MB Pro AV	SCSI-2 ULTRA	7.5 ms	£599	(£704)
9,000 MB Pro AV	SCSI-2 ULTRA	7.2 ms	£999	(£1,174)

All external drives delivered complete ready to plug in. Incl. SCSI- and net cable, active terminator and driver software.

Disc Direct's customer service

All you need to do is ring to us between 8:00 am and 6:00 pm on 01223 507 705 or fax 01223 507 711.

If you place your order before 6:00 pm (Monday to Friday) your goods will be sent the same day, provided they are in stock.

We despatch C.O.D. or accept credit cards.

We arrange for deliveries to arrive in the UK and most European destinations within twenty four hours.

We offer a 7 day right to return all goods and an unlimited free technical Hot Line.

We offer 12 months guarantee and free carriage for repairs.

FREE RETURN

DISC DIRECT COMPUTER LTD.

Disc Direct Computer Ltd., The Innovation Centre 140/9, Cambridge Science Park, Cambridge CB4 4GF

All prices are ex VAT and carriage. Carriage up to 20 kgs £7. Prices in brackets are including VAT. No responsibility accepted for price changes, goods out of stock, printing errors. Reseller application forms available on request.

Tel. 87301515 Fax 87301511
Tel. 07248/911-100 Fax 07248/911-911
Tel. 08/911194 Fax 08/911195
Tel. 0160058989 Fax 0160058999
Tel. 0222/9839300-0 Fax 0222/9839300-33
Tel. 2220 4222 Fax 2220 4221

MACFORMAT

IMPORTANT INFORMATION

This offer has been extended.

We are giving you one more chance to transfer your subscription to the CD version, and it needn't cost you a penny. Interested? Then please read on...

There are 2 options:

Transfer your current HD subscription to the CD version at no extra cost to you!

1 For the remainder of your subscription we will send you the CD version instead of the HD one. This will save you pounds off the cover price. At the end of your current subscription you will be offered a renewal to the CD version but at the new higher CD rate.

Transfer your HD subscription to the CD version and extend it for another 12 issues.

2 If you do this, we will give you the extra 12 CD issues at the old HD rate! This will save you even more money and, if your intention was to renew your subscription anyway, this is definitely the best deal for you.

What do you do now...?

Why not give us a call now on **01225 822511** and we'll update your subscription straight away. Alternatively, complete the form opposite and return it to us at the address listed.

Need more information?

No problem. Our customer services team is ready to answer your questions. Call us now on **01225 822511.**

LAST CHANCE OFFER ENDS ON 31 JULY 1997. DON'T MISS OUT - CALL US NOW!

OFFER EXTENDED FOR ONE MONTH ONLY!

❑ OPTION 1: Please transfer the remainder of my HD subscription to the CD version.
Your subscription will be transferred free of charge.

❑ OPTION 2: Please transfer my HD subscription to the CD version and then extend it for another 12 issues.

12 issues of *MACFORMAT* CD edition. **YOU SAVE £24!**
❑ UK £35.50 ❑ Europe £49.70 ❑ Rest of the World £68.10

Please choose your method of payment

❑ CHEQUE. Payable to Future Publishing - sterling cheques drawn on a UK account only

❑ VISA ❑ MASTERCARD Expires _____/_____

Card No _____

Signature _____ Date _____

Title _____ Initials _____

Surname _____

Postcode _____

Telephone Number _____

Subscriber Number (number to be found on your cover sheet)

No. _____

UK readers return this form by Freepost to: *MACFORMAT* Subscriptions, Future Publishing Ltd, Freepost BS4900, Somerton, Somerset, TA11 6BR.

Overseas readers return this form to: *MACFORMAT* Subscriptions, Future Publishing Ltd, Bancombe Road Trading Estate, Cary Court, Somerton, Somerset, TA11 6TB.

MCFHD8

MACFORMAT